The China Medical Missionary Journal.

Contents of No. 1. January, 1907.

Medical Missionary Association of China.

Officers:

PRESIDENT.

D. CHRISTIE, F.R.C.P., L.R.C.S. ... ... *Moukden.*

VICE-PRESIDENT.

J. M. SWAN, M.D. ... ... *Canton.*

ACTING-SECRETARY AND TREASURER.

C. J. DAVENPORT, F.R.C.S. ... ... *Shanghai.*

EDITORS OF JOURNAL.

C. S. F. LINCOLN, M.D.
W. H. JEFFERYS, A.M., M.D. } ... ... *Shanghai.*

CURATOR OF MUSEUM.

C. S. F. LINCOLN M.D. ... ... *Shanghai.*

Associate Editors of the Journal.

Hygiene—KATE C. WOODHULL, M.D.

Pathology and Bacteriology—JAMES L. MAXWELL, M.D

Surgery—J. PRESTON MAXWELL, M.B., F.R.C.S.

Medicine—EDWARD H. HUME., M.D.

The Medical Missionary Journal

PUBLISHED BY

The Medical Missionary Association of China.

The Subscription Price for THE CHINA MEDICAL MISSIONARY JOURNAL is Three Dollars a year. There are six numbers in each volume.

We will be obliged to our friends for an early transmission of the subscription money, as we have no reserve funds with which to meet our printers' bills. SUBSCRIPTIONS should be forwarded to the PRESBYTERIAN MISSION PRESS, Shanghai

Articles intended for THE CHINA MEDICAL MISSIONARY JOURNAL should be sent to the Editors, who solicit contributions from all Medical Practitioners in China, Corea, Japan, Siam, or elsewhere.

List of Members

OF THE

Medical Missionary Association of China.

ACTIVE MEMBERS.

Name.	*Qualification.*	*Station.*
Adams, W. F.	M.D., D.D.S.	Kiating, Szechuen.
Allan, F. F.	M.D.	Chentu, ,,
Anderson, J. A.	,,	Taichow, via Ningpo.
Anderson, P.	L.R.C.S. & P.	Tainan, Formosa.
Aspland, W. H. Graham	M.D., C.M., M.R.C.S., L.R.C.P.	Peking.
Avison, O. B.	M.D.	Seoul.
Ayers, T. W.	,,	Hwanghsien, via Chefoo.
Balme, Harold	F.R.C.S.	Taiyuenfu.
Barrie, H. G.	M.D.	Changsha, Hunan.
Baxter, A. K.	M.B., Ch.B.	Yungpingfu, Chihli.
Beam, J. A.	M.D.	Yochow, Hunan
Beebe, R. C.	,,	Nanking.
Behrents, O. S.	,,	Choshan, Honan, via Hankow
Benn, Miss R. R.	,,	Taian, Shangtung.
Berkin, Mrs. John	,,	Kuling, Kiangsi.
Betow, Miss E. J.	,,	Singiu, Fukien.
Bigler, Miss R. M.	,,	Canton.
Bixby, Miss J. M.	,,	Kiehyang, via Swatow.
Blaikie, Mrs. Garden,	M.B., Ch.B.	Chaochowfu, via Swatow.
Bliss, E. L.	M.D.	Foochow.
Boggs, Mrs. J. J.	,,	Canton.
Boone, H. W.	,,	Shanghai.
Booth, R. T.	M.B., B.Ch.	Hankow.
Boyd, H. W.	M.D.	Canton.
Bragg, Thomas	L.R.C.P. & S.	Weichun, Chihli.
Bretthauer, Emelia	M.D.	Hanyang, Hupeh.
Broomhall, B. C.	F.R.C.S.	Taiyuanfu, Shansi.
Bryan, H. C.	M.D.	Nodoa, via Hoihow, Hainan.
Butchart, J.	,,	Lucheofu, Anhuei, via Wuhu.
Bynon, Miss M. H.	,,	Weihsien, Shantung.

Corrections invited. Kindly send to the Secretary,

P. B. COUSLAND,
2, Shantung Road,
Shanghai.

Name.	*Qualification.*	*Station.*
Canright, H. L.	M.D.	Chentu, Szechuen.
Carleton, Miss M. E.	,,	Mungchiang, via Foochow.
Carr, John,	M.B.,Ch.B.,F.R.C.P.E.	Pingyangfu, Shansi.
Carr, S. H.	M.D.	Kaifengfu, Honan.
Case, J. N.	,,	Weihaiwei.
Cattell, Miss F. F.	,,	Soochow.
Charles, M. R.	,,	Nanchangfu, Kiangsi.
Christie, D.	F.R.C.P., L.R.C.S.,Ed.	Moukden, Manchuria.
Churchill, H. M.	M.R.C.S., L.R.C.P.	Kienning, Fukien.
Cochran, Samuel	M.D.	Hwaiyuen, via Nanking.
Cochrane. Thomas	M.B., C.M.	Peking.
Cole, A. F.	M.R.C.S., L.R.C.P.	Ningpo.
Cooper, Miss E. B.	M.D.	Chefoo.
Cooper, Miss F. M.	L.S.A.	Lo-nguong, via Foochow.
Cormack, J. G.	L.R.C.S. & P.	Hankow.
Cousland, P. B.	M.B.. C.M.	Shanghai.
Cox, G. A.	L.R.C.P. & S.,	Chinkiang.
Cox, J. R.	M.D.	Renshou, Sz.,viaChungking
Crooks, Emma M.	M.B., Ch.B.,B.A.O.	Fakumen, Manchuria.
Daniel, Thos. H.	M.D.	Kunsan, Korea.
Davenport, C. J.	F.R.C.S., L.R.C.P.	Shanghai.
Davidson, Wm. H.	M.R.C.S.	T'ungch'wanfu.
DeVol, G. F.	M.D.	Nanking.
DeVol, Mrs. G. F.	M.D.	Nanking.
Dipper, E.	,,	Tsingtao.
Dobson, W. H.	,,	Yuenkong, Kwangtung.
Dow, Miss J.	M.B.	Chentehfu, Honan.
Edmonds, Miss A. M.	M.D.	Chungking.
Edwards, E. H.	M.B., C.M., Ed.	Taiyuanfu, Shansi.
Eich, G. L. F.	M.D.	Tungkun, via Canton.
Ellerbek, S. A.	M.B., B.Ch. Ed.	Antung, Manchuria.
Ensign, C. F.	M.D.	Taianfu, Shantung.
Eubank, M. D.	,,	Huchow.
Evans, P. S., Jr.	,,	Yangchow, via Chinkiang.
Ewan, R. B.	,, C.M.	Chengtu, Szecbuen.
Fahmy, A.	M.B., C.M.	Chiangchiu, via Amoy.
Fearn, J. B.	M.D.	Huchow.
Fearn, Mrs. A. W.	,,	,,
Ferguson, J. Young	M.A., M.D., C.M.	Tamsui, Formosa.
Fleming, Miss E. E.	M.D.	Ichowfu.
Fowler, H.	L.R.C.P. & S.	Hsiaokan, Hupeh.
Fouts, Frederick,	M.D.	Ichowfu, Shantung.
Freeman, C. W.	M.B., B.S.	Chungking.
Fulton, Miss M. H.	M.D.	Canton.
Garner, Miss E.	,,	Shanghai.
Gibson, R. M.	M.B., C.M., Ed.	Hongkong.
Gillespie, J. R.	M.B., C.M.	Moukden

Name.	*Qualification.*	*Station.*
Gillison, T.	M.B., C.M.	Hankow.
Glenton, Miss M. V.	M.D.	Wuchang.
Gloss, Miss A.	,,	Peking.
Goddard, F. W.	,,	Shaoshing, via Ningpo.
Goldsmith, A. W.	M.B., Ch.B.	Fuhning, Fukien.
Gotteberg, Mrs. R. B.	M.D.	Changsha, Hunan.
Graham, A.	L.R.C.P. & S.	Ichang.
Grandin, Lillian M.	L.R.C.P. & S.	Chaotong, Yünnan.
Grant, J. S.	M.D.	Ningpo.
Grant, Miss M. S.	,,	Kiaying, via Swatow.
Greig, J. A.	F.R.C.S., Ed.	Kirin, Manchuria.
Guinness, G. W.	B.A., M.B., B.Ch.	Kaifengfu, Honan.
Hager, C. R.	M.D.	Hongkong.
Hall, Asa Z.	M.D.	Ningyueufu, Szechuen.
Hall, J. A.	,, C.M.	Iloilo, Philippine Islands.
Hall, Rosetta S.	,,	Pyongyang, Korea.
Hamilton, Annie I.	,,	Shanghai.
Hannington, M. L.	,, C.M.	Ningdaik, Fukien.
Harris, Miss L. E.	M.B.	Tungchuanfu, Szechuen.
Hart, E. H.	M.D.	Wuhu.
Hearn, A. G.	,,	Soochow.
Hemingway, W. A.	,,	Taiku, Shansi.
Henry, Miss A.	,,	Chentu, Szechuen.
Hewett, J. W.	M.R.C.S., L.R.C.P.	Lancheo, Kansuh.
Hoag, Miss L. H.	M.D.	Chinkiang.
Hodge, S. R.	M.R.C.S., L.R.C.P.	Hankow.
Hogg, A.	M.A., M.D., C.M.	Chefoo.
Hopkins, N. S.	M.D.	Peking.
Horder, E. G.	,,	Pakhoi.
Horner, Miss M. C.	L.R.C.P. & S.	Moukden.
Hotvedt, I. M. J.	M.D.	Fancheng, via Hankow.
Houghton, Henry S.	Ph.B., M.D.	Wuhu.
Hume, E. H.	M.D.	Changsha, Hunan.
Hu King-eng, Miss	,,	Foochow.
Huntley, G. A.	,,	Hanyang, Hupeh.
Ingram, J. H.	,,	Tungchow, Chihli.
Jefferys, W. H.	,,	Shanghai.
Johnson, C. F.	,,	Ichowfu, Shantung.
Jones, A. F.	L.R.C.P. & S.	Ningching, via Tientsin.
Jones, John	,, M.R.C.S.	Ningpo.
Judd, F. H.	M.B., C.M.	Raocheo, Kiukiang.
Kahn, Ida	M.D.	Nanchangfu, Kiangsi.
Keeler, Joseph L.	N.Y.H.M.C.	Ch'angli, North-China.
Keers, Mrs.	M.B.	Chinchow, Manchuria.
Keller, F. A.	B.A., M.D.	Changsha, Hunan.
Kelly, W.	M.D.	Chenchow, ,,
Kember, A. T.	F.R.C.S.	Hangchow.

Name.	*Qualification.*	*Station.*
Ketring, Mary	M.D.	Chungking, Szecbuen.
Kilborn, O. L.	,,	Chentu, ,,
Kilborn, Mrs. O. L.	,,	,, ,,
Kinnear, H. N.	,,	Foochow.
Kirkwood, T.	M.B., C.M.	Tientsin,
Koons, Miss S. L.	M.D.	Taianfu, Shantung.
Krumling, F. C.	,,	Chenchow, Hunan.
Kühne, J. E.	,,	Tungkun, Kwangtung.
Landsborough, D.	M.B., C.M.	Chianghoa, Formosa.
Lassell, S. L.	M.D.	Kacheck, Hainan.
Layton, E. A.	,,	Nanking.
Learmonth, B. L.	M.B., C.M.	Hsinminfu, Manchuria.
Lee, Claude M.	M.D.	Wusih.
Lee, Miss V. J.	,,	Kiashing.
Lenwood, Miss N.	M.B., Ch.B., Ed.	Peking.
Leslie, P. C.	M.D., M.R.C.S.	Changteh, Honan.
Lewis, Charles	M.D.	Paotingfu, Chihli.
Lewis, Eliz. F.	B.S., M.D.	,, ,,
Lewis, S. C.	M.D.	Hangchow, Hunan.
Lincoln, C. S. F.	,,	Shanghai.
Logan, O. T.	,,	Changteh, Hunan.
Louthan, A. D.	,,	Chenchow, Honan.
Lowry, G. D.	,,	Peking.
Lyall, A.	M.B., C.M.	Swatow.
Lyon, C. H.	M.D.	Chiningchow, via Chinkiang.
Lyon, Miss E. M.	,,	Foochow.
Machle, E. C.	,,	Canton.
Mack, Isabella	A.B., M.D.	,,
Macklin, W. E.	M.D.	Nanking.
Main, D.	L.R.C.P., M.R.C.S.E.	Hangchow.
Marshall, F. W.	L.R.C.P. & S.	Wutingfu, via Tientsin.
Massey, Ruth	M.B., Ch.B.	Wuchang.
Masters, Miss L. M.	M.D.	Foochow.
Maxwell, J. L.	,, B.Sc.	Tainan, Formosa.
Maxwell, J. Preston	M.B., F.R.C.S.	Engch'un, via Amoy.
McAll, P. L.	M.B., Ch.B.	Hankow.
McCandliss	M.D.	Kiungchow, Hainan.
McCartney, J. H.	,,	Chungking.
McClure, W.	,, B.A.	Weihweifu, Honan.
McCracken, J. C.	,,	Canton.
McDonald, John A.	B.A., M.D., C.M.	Macao.
McKean, J. W.	M.D.	Chengmai, Siam.
McMurtry, H. O.	B.A., M.D., C.M.	Weihweifu, Honan.
McMurtry, Shirley O.	M.D., C.M.	,, ,,
McPhun, J. F.	M.B., C.M.	Samhopa, via Swatow.
McWillie, J.	M.D.	Wuchang.
Meadows, J. G.	,,	Wuchow, Kwangsi.

Name.	*Qualification.*	*Station.*
Menzies, J.	M.D.	Weichengfu, Honan.
Merwin, Miss C. S.	,,	Chinanfu, Shantung.
Montgomery, J. H.	M.B., Ch.B.	Changpu, via Amoy.
Morgan, Lorenzo B.	M.D.	Tsingkiangpu.
Morgan, Ruth B.	,,	,,
Morley, A.	L.R.C.P. & S.	Tehngan, via Hankow.
Myers, Miss A. M.	M.D.	Shanghai.
Neal, J. B.	,,	Chinanfu, Shantung.
Newell, Miss M.	,,	Shanghai.
Niles, Miss M. W.	,,	Canton.
Nilsen, J. E.	,,	Iyang, Hunan.
Noyes, Mrs. W. D.	,,	Canton.
Null, M. M.	,,	Chongju, Korea.
Null, Mrs.	,,	,, ,,
O'Donnell, Miss F. M.	,, C.M.	Chentu, Szechuen.
Olpp, G.	,,	Tungkun, Kwangtung.
Osgood, E. I.	,,	Chucheo, via Nanking.
Otte, J. A.	,,	Amoy.
Oxner, J. W.	,,	Pingtu, Shantung.
Palmborg, Miss R. W.	,,	Shanghai.
Parish, R.	,,	Manila, P.I.
Park, W. H.	,,	Soochow.
Parry, H.	M.R.C.S., L.R.C.P.	Chungking.
Patterson, Mrs. C. B.	M.D.	Suchien, Kiangsu.
Patterson, T. C.	,,	Chouping, Shantung.
Peake, E. C.	M.B., C.M.	Hengchow, Hunan.
Peck, A. P.	M.D.	Tientsin.
Peill, E. J.	M.B., C.M., F.R.C.S.	Peking.
Peill, Syd. G.	,, Ch.B.	Tsangchow.
Pell, John W.	L.R.C.S. & P.	Paoch'ing, Chihli.
Plummer, W. E.	M.R.C.S., L.R.C.P.	Wenchow.
Polk, Miss M. H.	M.D.	Soochow.
Rees, Philip	B.A., B.Sc., M.B.	Fatshan, via Canton.
Reifsnyder, Miss E.	M.D.	Shanghai.
Riddel, Rev. W.	,,	Wukingfu, via Swatow.
Robson, J. K.	,,	Tongshan, via Tientsin.
Roys, Chas. K.	B.A., M.D.	Weihsien, Shantung.
Sandeman, M.	M.B., C.M.	Suabue, via Swatow.
Sanger, F.	,,	Hinghua, Fukien.
Saville, Miss L. E. V.	M.D.	Peking.
Savin, L.	,,	Chaotong, Szechuen.
Scott, Wm. T.	,, C.M.	Weihuifu, Honan.
Selden, C. C.	,, Ph.D.	Canton.
Service, C. W.	,,	Kiating, Szechuen.
Seymour, W. F.	,,	Tengchow, via Chefoo.
Shackleton, W.	,,	c/o C. I. M., Shanghai.
Shire, Miss M. J.	L.R.C.P. & S.	Foochow.

Name.	*Qualification.*	*Station.*
Shumaker, H. K.	M.D.	Canton.
Shields, R. T.	,,	Donchang, Kashingfu, Chekiang.
Sibree, Alice	L.R.C.P. & S.	Hongkong.
Simms, Mary E.	M.B., Ch.B., B.A.O.	Chinchow, Manchuria.
Sjoquist, J.	M.D.	Siangyang, via Hankow.
Skinner, J. E.	,,	Kucheng, Foochow.
Skinner, Mrs. S. L.	,,	,, ,,
Smith, Miss E. D.	,,	Foochow.
Smith, G. P.	M.B.	Tientsin.
Smith, W. E.	M.D.	Kiating, Szechuen.
Smyth, R.	M.B., Ch.B.	Ningpo.
Somerville, C. W.	,, C.M., D.P.H.	Wuchang.
Squibbs, W.	F.R.C.S., L.R.C.P.	Mienchuhsien, Szechuen.
Starmer, E. L.	M.B., C.M.	Moukden.
Stewart, Mrs.	M.D.	Hankow.
Stewart, David T.	,,	Soochow.
Stooke, G. F.	L.R.C.P. & S.	Ichang, Hupeh.
Stone, Miss M.	M.D.	Kiukiang.
Stryker, Miss M.	,,	Foochow.
Stuart, G. A.	,,	Nanking.
Stuckey, Ed. J.	B.Sc., M.B., B.S.	Hsiaochang, Chihli, via Tichow, Chinanfu.
Stumpf, C. O.	M.D.	Siokhe, via Amoy.
Swan, J. M.	,,	Canton.
Taft, Miss G.	,,	Chinkiang.
Tallman, Susan B.	,,	Linching, Shantung.
Tatchell, W. A.	M.R.C.S., L.R.C.P.	Hankow.
Taylor, Adrian S.	M.D.	Yangchow, Kiangsu.
Taylor, H. B.	,,	Ngankin.
Taylor, B. van S.	M.B.	Hinghua.
Teusler, R. B.	M.D.	Tokio, Japan.
Todd, P. J.	,,	Canton.
Tompkins, C. E.	,,	Suifu, Szechuen.
Tooker, F. J.	,,	Siangtan, Hunan.
Tooker, Mrs.	,,	,, ,,
Toy, W. B.	,,	Pitsaunlok, Siam.
Tribe, Miss E. N.	,,	Amoy.
Tucker, A. W.	A.B., M.D.	Shanghai.
Tucker, F. F.	M.D.	P'angchuang, Chihli.
Tucker, Mrs. E. B.	,,	,, ,,
Vanderburgh, E. D.	,,	Siangtan, Hunan.
Venable, W. H.	,,	Kiashing, Chekiang.
Vickers, Helen	M.B, Ch.B.	Wuchang.
Vortish, Herman	M.D.	Hoynan, Canton.
Waite, Mrs.	,,	Weihsien.
Wakefield, A. P.	Ph.B., M.D.	Nanking.
Watson, J. R.	M.B., M.R.C.S.	Chingchowfu, Shantung.

Name.	*Qualification.*	*Station.*
Watson, Mrs.	L.K.Q.C.P. & S.	Chingchowfu, Shantung.
Weir, H. H.	M.B., M.R.C.S.	Chemulpo, Korea.
Wells, J. Hunter	M.D.	Pyengyang, Korea.
Welpton, H. G.	,,	Luchowfu.
Wenham, Herbert V.	M.B., B.S., F.R.C.S.	Peking.
Westwater, H. M.	L.R.C.P. & S.	Liaoyang, Manchuria.
Whitmore, F. B.	B.Sc., M.D.	Nanking.
Whitney, H. T.	M.D.	Foochow.
Whyte, G. D.	M.B., Ch.B.	Swatow.
Wight, Andrew	,, ,,	Chaochowfu, Swatow.
Wilkinson, J. R.	M.D.	Soochow.
Wills, E. F.	M.B., C.M.	Tsaoshih, Hupeh.
Wilson, W.	,, ,,	Hsüting, Sz., via Ichang.
Wittenberg, H.	M.D.	Kiayingchow, via Swatow.
Wolfendale, Richard	L.R.C.P. & S.	Chungking.
Woodhull, Miss K. C.	M.D.	Foochow.
Woods, A. H.	,,	Canton.
Woods, J. B.	,,	Ts'ingkiangpu, Kiangsu.
Woodward, E. L.	,,	Ngankin.
Worley, R. E.	,,	Swatow.
Worth, G. C.	M.D.	Kiangyin.
Wright, J. M.	,,	Takhingchow, Kwangtung.
Young, Andrew Y.	L.R.C.P. & S.	Hsianfu, Shensi.
Young, Charlotte M.	M.A., M.D.	,, ,,
Young, C. W.	M.D., B.S.	Peking.
Young, E. McK.	M.B., C.M.	Ashiho, Manchuria.
Young, W. A.	,, ,,	Moukden, ,,

CORRESPONDING, HONORARY AND ABSENT MEMBERS.

Name.	*Qualification.*	*Station.*
Aldridge, Rev. Arthur	M.R.C.S., L.R.C.P.	England.
Barchet, S. P.	M.D.	Shanghai.
Bement, Lucy P.	,,	At home.
Brown, H. M.	,,	Korea (?)
Brown, P. B.	,,	Nanchangfu, Kiangsi (?)
Burnham, Mary	,,	At home.
Coltman, R. J.	,,	Tientsin.
Crews, Rev. G. B.	,,	At home.
Daly, C. de B.	,, C.M.	Newchwang.
Davis, Rev. D. H.	M.A., D.D.	Shanghai.
Eytinge, E. J.	M.D.	U.S. Navy.

Name.	*Qualification.*	*Station.*
Faries, W. R.	M.D.	Orange, Cal., U.S.A.
Farnham, Rev. J. M. W.	D.D.	Shanghai.
Feldmann, C. H.	M.D.	Eikardsheim, Minden, Germany.
Fryer, John	L.L.D.	U.S.A.
Gaynor, Lucy A.	M.D.	165 Walmet St., Chicago.
Hickin, H.	M.B., C.M.	Weihaiwei.
Irwin, J. O. M.	M.D.	Tientsin
King, Mrs. L. H.	,,	London Mis., Tientsin.
Lalcaca, C.	,,	Shanghai.
Lambuth, Rev. W. R.	,,	U.S.A.
Layng, Henry	M.R.C.S.	Swatow.
Mabie, Dr.		Congo.
McFarlane, S. S.	M.B., C.M.	In England.
McLeod, Neil,	M.D.	Shanghai.
Milles, W. J.	F.R.C.S.	Shanghai.
Mills, C. F.	M.D.	Ningpo.
Moule, Rt. Rev. G. E.	D.D.	Hangchow.
Olsen, G. M.	M.D.	U.S. Navy.
Parrott, A. G.	M.R.C.S., L.R.C.P.	Shanghai.
Porter, Rev. H. D.	M.D.	La Mese, San Diego Co., Calif.
Rennie, T.	M.D., C.M.	Foochow.
Scott, Mrs. A. K.	M.D.	4509 Carnegie Av., Cleveland, O.
Scudder, Ida	,,	Vellore, India.
Simpson, Sir Alex. R.	,,	Edinburgh, Scotland.
Thomson, Ven. Archdeacon		Shanghai.
Thomson, John D.	M.B., C.M.	At home.
West, B. F.	M.D.	Seattle, U.S.A.
Woolsey, F. M.		Unknown.

SHANGHAI, *April 29th, 1907.*

DEAR DOCTOR:

At the General Meeting of the Association, just completed, the question of our relation to the progress of knowledge and treatment was very seriously discussed, with the result that it was evident that a very general feeling existed that we were failing to fulfil our duties and seize our opportunities in this matter. It was therefore decided to appoint a Committee of Investigation, whose duty should be to try and gather up the work carried on by branches and individual members. We quite realise that it is impossible for many of the members to devote more than a small fraction of their time to this work. We are, however, equally clear that even thus much might be done to solve some of the problems constantly meeting us in the practice of our profession here. Further we confess to a very strong feeling that in failing to do more than see beyond our own little horizon and in not recognizing the claims of the races of China as a whole on our services, we are failing to do our duty in the service of our Lord and Master.

When this subject was brought before the notice of the general meeting, few of the members were aware that that energetic body, the Central China Branch of the Medical Missionary Association, had already forestalled the action of the parent Association by forming a local research committee. It was therefore felt in forming a General Committee that it would be well to model our recommendations on the proposals already issued by the Research Committee of the C. C. M. M. A. so as to ensure complete unity in our work of investigation and so obtain the best results possible in the quickest time.

The Investigation Committee as at present appointed consists of:

W. H. Jefferys	... ...	Shanghai.
C. W. Somerville	... ...	Wuchang.
R. T. Booth ...	... ...	Hankow.
J. MacWillie	... ...	Wuchang.
O. T. Logan...	... ...	Changteh, Hunan.
H. S. Houghton	... ...	Wuhu.
J. P. Maxwell	... ...	Eng-chhun, Amoy.
H. H. Weir ...	... ...	Chemulpo, Korea.
I. E. Kuhne...	... ...	Tung-kun, Canton.
J. D. Maxwell	... ...	Tainan, Formosa (Chairman).

With power to add to their numbers.

At a meeting of such members of the Committee as could assemble on the spot, held in Shanghai on April 24th, 1907, it was agreed :—

1. That each Branch Association not already represented on this Committee he asked to recommend one of its number for appointment by the Committee.

2. To print a letter asking the members of the C. M. M. A. to undertake investigations in the microscopical diagnosis of fæcal infection. Forms for such investigations to be obtained on application to either of the Editors of the CHINA MEDICAL JOURNAL.

3. The results on the forms supplied to be returned hy members of a branch to the representative of that branch on the Investigation Committee. Unattached memhers to return their forms to the member of the Committee nearest to their station or to the Chairman.

Preliminary reports by the members of the Committee to he sent to the chairman in December, 1907.

4. In cases of douht or special interest specimens to he forwarded to the nearest memher of the Investigation Committee, who shall in cases of need forward some to one of the following members forming the suh-committee on such case :—

W. H. Jefferys,	St. Luke's Hospital,	Shanghai.
R. T. Booth,	London Mission,	Hankow.
J. D. Maxwell,	Tainan,	Formosa.

The members of the Suh-committee shall append their individual opinions, and if they think necessary take such further action as is required to arrive at a solution of the matter.

They shall, finally, return the Committee's opinion in writing to the original sender with a request that he publish the case in the JOURNAL.

5. To draw up a list of books giving assistance in the line of research undertaken, and if possible publish diagrams of some of the fæcal contents commonly met with.

The afore-mentioned forms to be obtaiued from the Editors, request the following items :—

1. Sex of patient.
2. Age of patient.
3. In or out-patient.
4. Disease of patient.

5. Number of slides examined.

6. Details of ova found with approximate proportion.

(e.g., 1 slide may contain 20 ascaris (normal) egg, 5 x eggs, 3 trichocephalus eggs, 7 ankylostomum eggs, etc., etc.).

7. Note if fæces are examined, because patient's symptoms point to infection with intestinal parasites, or in the course of a systematic investigation.

Presence or absence of amœbæ. (If slide not carefully searched for these, note not examined).

Note.—To prepare a specimen of fæces take a small portion of stool with the end of a match and place on slide ; mix with a drop of distilled water (or better *saline* solution), cover with slip and examine with low power.

Aperture of diaphragm must be very small, especially in looking for ankylostomum eggs or amœbæ. Little pressure must be made on the slip after placing it on the slide, and it must never be squeezed to spread out the specimen. If this be done the albuminous coating may be torn off many of the ascaris eggs, and they may be confused with ankylostomum eggs. Such may usually be recognized by noting the albuminous coating gathered up into a tangle at one pole of the egg, or when employing the high power by observing that the shell, though smooth and transparent, has still a double contour. The shell of the ankylostomum egg, *never shows a double contour.*

The eggs of worms we may expect to see, are in their probable order of frequency those of :—

Ascaris lumbricoides.
Trichocephalus dispar.
Ankylostomum duodenale.
Schistosomum Japonicum.
Flukes.

The egg of oxyuris vermicularis is seldom found in the stools.

The worms to be found in the stools after (or without) treatment are :

Ascaris lumbricoides.
Ankylostomum duodenale.
Live embryoes of ankylostomum.
Segments of tape worms.
Flukes.

And very rarely oxyuris vermicularis and trichocephalus dispar.

The Investigation Committee recommends that for the present year members pay particular attention to these eggs and worms and to the amœbæ of dysenery.

The Chairman would ask as a personal favour that members meeting with cases showing the toxicity of the ascaris lumbricoides would communicate with him, giving detailed accounts of such cases, as he is very anxious to collect reliable evidence on this question. He need hardly add that such details should he as scientifically precise as possible if they are to be of any value.

Earnestly desirous of obtaining your valuable assistance in pushing forward our knowledge of these questions,

We remain,

Fraternally yours,

In the name of the Committee,

JAMES L. MAXWELL.

IN FRONT OF THE KITCHEN, LEPER HOSPITAL, TUNGKUN.

Women. The Evangelist.

The
China Medical Missionary Journal.

VOL. XXI. JANUARY, 1907. NO. 1.

Original Communications.

[All papers must be in the hands of the Editors two months before date of publication to insure their appearance in the following number. The editors cannot undertake to return manuscripts which are sent to them. A complimentary edition of a dozen reprints of his article will be furnished each contributor. Any number of reprints may be had at reasonable rates if a *written* order for the same accompany the paper.]

INTUSSUSCEPTION THROUGH THE NECK OF AN OPIUM-LAMP GLASS SHADE.

By HAROLD BALME.

The following case is of interest owing to the peculiar character of the "accident" and of the condition so produced:—

On July 7th I was asked to see a patient with Dr. G. A. Charter, who was said to be in a very critical state. The history was as follows: The patient was a small official of about fifty years of age, who had come from Shensi to Tai-yuan-fu some time previously, seeking office. Whilst there he seems to have employed a great part of his time smoking opium and drinking spirits, and no one could tell (or would tell) very much about his manner of life.

On July 5th he had a regular drunken bout, and appears to have spent the whole day drinking spirits at the inn where he was lodging.

Next morning he was found by his friends in a more or less collapsed condition, and they sent for Dr. Charter, telling him that they believed he was suffering from dysentery. Later on, however, the patient stated that he had swallowed "a glass bottle" on the previous day, that he was suffering considerable abdominal pain and had lost a great deal of blood per rectum.

On July 7th Dr. Charter examined the patient under an anæsthetic, and discovered a hard circular substance firmly impacted in the rectum, high up, whilst an intussusception of some considerable size could be felt, occupying the centre of this hard ring.

The same evening I saw the man, with Dr. Charter. His general condition was better than might have been expected, considering his history. He had only vomited once, and his pulse was fairly good, whilst the pain of which he complained was evidently not very severe. There was very definite tenderness in the lower part of the abdomen, much more marked on the left side, and also considerable distension of the colon, which almost obscured the liver dulness. Per rectum there was a fair amount of blood aud mucus ; the condition being as described by Dr. Charter. The man was in no way collapsed, however.

With the consent of his friends, it was decided to operate at once, in the hope of removing the obstruction and reducing the intussusception, and the man was accordingly removed to hospital without delay. Having anæsthetized the patient, a thorough exploration of the rectum was made, and it was decided to make an attempt to deal with tbe condition by that route, as the intussusception was far too low to have been easily dealt with per abdomen. This, however, proved to be no light matter. Being quite ignorant of the nature of the impacted object, it was not thought wise to attempt any forcible means of extraction, but rather to break it up into pieces and so remove it. This was ultimately accomplished by means of bone forceps, etc., the bowel being protected by the fingers of one hand, but the glass substance was sufficiently high up to make this procedure very tedious. Once, however, the object was extracted, but little difficulty was experienced in reducing the intussusception.

It was then found that the impacted article was one of the thick glass shades so commonly seen on opium lamps, and there is no doubt whatever that instead of swallowing it, as he said, the man had in reality forced it into the rectum during his drunken fit, part of the sigmoid then becoming forced through the circular opening.

Unfortunately the operation proved to be too severe—or performed too late—to save the man's life. Although he had a fairly good pulse when he left the table, it became very weak in the course of a few hours, and in spite of the repeated use of various stimulants, he died next morning. Before then, however, he passed a large motion (in spite of being under *morphia*), so that the colon was evidently quite patent ; his death being apparently due to his exhausted condition.

A CASE OF INFECTION WITH SCHISTOSOMA JAPONICUM.

By H. B. Taylor.

The patient, a Chinese boy, age eleven, was a native of Wang-chiang-hsien, about forty miles from Ngankin, near the Kiangsi border. He gave a history of chronic diarrhœa of many years' standing. Stools bloody at times. Accompanying the diarrhœa there had been gradual enlargement of abdomen and progressive weakness and emaciation. No history of œdema at any time.

The boy was extremely emaciated: face, body and extremities. Liver much enlarged to three or four finger breadths below costal margin; very tender with rough nodular feeling on palpation through thin abdominal walls. Spleen also much enlarged, tender but without nodular feeling. Intestines distended with gas.

The first time the patient came to our dispensary the stools were formed and contained no blood microscopically. On examination the ova of *Schistosoma Japonicum* were found in small number, along with many of the *Ascaris lumbricoides*. Subsequently the patient returned with dysentery. The ova were again found. This diagnosis was kindly confirmed by Dr. Logan, of Chang-teh, to whom I sent a specimen and whose cases of *Schistosoma* infection were reported in the Journal last year.

At this time the boy was weaker and more emaciated than at the previous visit. His abdominal symptoms remained as before. He remained three weeks in the hospital without material benefit.

AVAILABLE CHINESE DIETARY FOR INFANTS.*

By Dr. Ethel Rowley, Wesleyan Mission, Hankow.

This subject was suggested to me as being one of interest to all in medical work in China. Some months ago I refused to write a paper for these gatherings, and I only presume to do so now to fill up a gap, and because First, I feel how exceedingly important this matter is to us all, Second, because I realise how exceedingly little I know about it, and hope that the little I can say upon it may lead to a discussion, in the course of which I may receive help and teaching.

First then: A. I suppose everyone who has to do with the out-patient department of a hospital, is constantly being brought face to face

* A paper read before the Kuling Medical Missionary Association.

with the poor little wizeued infant, with the large, hard abdomen and chronic constipation; the infant who in the abseuce of its natural nourishment has been fed on "kao." Usually the little face wears a look ot pinched anxiety, and gives one the impression of unsatisfied, gnawing hunger. Should there still be a little secretion of milk in the mother's breasts, sometimes one can set things right by the gift of a couple of tins of milk, a touic and advice as to special liquid diet, all for the *mother*, but too often there is either no mother in the case or her milk has entirely stopped. One has then to face the fact that a tin or two of condensed milk as a gift will not go far in the many months that must elapse before the child is fit to take ordinary food. The remedy of the rich, a wet nurse, is usually not to be thought of because of expense; the baby is none the less precious to its parents, because they are poor, and what is to be done? The "kao" spoken of is a kind of biscuit made of baked rice flour mixed with water, and is given to the child soaked in water and broken up. That is to say, we have a starchy diet without oil, without sugar, two most important elements of baby-diet. Yet it is probably better than the other foods given to children by Chinese. In some country cases, when one has suggested it, the parents have been able to procure goat's or buffalo's milk at small cost to supplement the "kao" diet, but this help is out of reach for town babies.

For them, I have suggested the following, and in some cases found it answer very well:—

1. One ounce of hemp oil (ma-iu) or vegetable oil (ts'ai-iu), to be rubbed into the baby's groins and axillæ during the day.

(If cotton-oil (mien-iu) can be obtained it is quite palatable, makes an excellent substitute for *cod liver oil* and can be given in half to one teaspoonful doses with each feed. In *cities*, however, it is uot nearly so easy to get as the other oil).

2. Half a teaspoonful of sugar to be added to each "kao" feed and the food to be given at regular intervals.

3. Doses of raw beef juice, the formula for makiug which we give to the parents, to be given twice every second or third day.

4. Where vomiting occurs I have found a gluten diet useful for a short time to supersede the other. This can be obtained from the ordinary mo-mo (mo-mo is wheaten bread, raised with soda and cooked by steaming it). The inside of a mo-mo cake is put in a saucepan, well covered with cold water, brought to a boil and boiled for a quarter hour, then squeezed through very coarse muslin. A little sugar should be added. The oil inunction should go along with this diet.

5. The white of one egg, beaten up in some strained mi-tang (rice water) and given once a day, is a helpful and easily attainable addition to the baby's dietary.

B. Then comes that other class of babies so numerous among our patients—the wretched little infants who, at a few months old, are being fed, as their mothers triumphantly inform us, on "everything that we have" with the result that the child has chronic diarrhœa, is always crying, refuses all food, has a large flabby abdomen and often fever and vomiting. After judicious dosing with *castor oil*, a prohibitive dietary will be needed for some time. In these cases comes in the value of albumen diet. This consists of the beaten white of one egg, to which two-fourth ounces of cold rice water (made like ordinary barley water) and a little sugar have been added. This quantity may be given every two hours.

I find children will take the albumen this way when they will refuse it if only mixed with water. If this diet has to be continued for more than three or four days, raw beef juice should be given twice a day in addition. I have seen two cases in previously very ill-nourished children, where scorbutic symptoms occurred, which I think might have been prevented in this way. But one must learn from sad experience.

At best, however, when all is said and done, we are in a bad way without a cheaper supply of milk. Imported milk cannot be sold at less than 250 cash a tin, and one tin ought not to last more than two days if a child over a month old has its right quantity and proportion, which means that it is out of reach of the ordinary outpatient's purse.

It seems to me there is ample scope in this direction for some philanthropic capitalists in the matter of instructing the Chinese in the management of milk farms, and probably the quantity of the pasturage in this part of China at least makes goat's milk the most likely to be obtainable on a large scale. But perhaps we can each do something till that happy day dawns, as we sit in our dispensaries, towards talking up the value of the milk of the various animals and we *might* just happen to talk to the right Chinese to do something some day.

There is one point which often puzzles me out here. Why is *rickets* so rare even among these wasted children ? In ten and half years I have only seen *one* marked case and very few mild ones. Does it not badly upset all our theories about the disease ?

I trust that some of my difficulties are going to be cleared up by those here this evening, and I have a very sharp pencil and a very large sheet of paper wherewith to perpetuate the coveted knowledge that I am going to receive and thank you for.

I see from the postcard received after this paper was written, that the subject announced is infant dietary in China, which would give a much wider range. I will therefore add that in our hospital healthy hand fed infants are fed on condensed milk, lime water and barley water with some *cod liver oil* added to each feed, while for the sick little ones we use large quantities of patent foods, such as the invaluable because partially peptonised Benger's and Mellin's, etc., just as one would at home. But the in-patient babies are such a small proportion of the sick babies we have to advise for and treat that it seems to me that we want most of all to scrape information from all quarters as to infant dietary obtainable by poor Chinese.

OLD AND NEW METHODS IN RECENT MEDICAL LITERATURE.

By W. H. VENABLE.

The medical literature of the past year has seemed to me to be unusually interesting, and I trust that a brief *résume* of some of the interesting points may prove helpful to the readers of the JOURNAL.

I have noticed a large number of methods suggested for the preparation of catgut and have tried some of them. I have been more successful with the Claudius method than any other. This consists in immersing the catgut for eight days in a watery solution of one per cent. each of *iodine* and *potassium iodide*. From the reports of bacteriological examinations of catgut immersed in this solution it would seem that it is usually sterile after immersion for five or six hours and always at the end of twenty-four hours, so it does not seem clear why it is necessary to immerse it for eight days. It is stated that the catgut may remain in this solution indefinitely without becoming weakened. No doubt some samples of catgut are more resistant to the weakening influence of the solution than others. Some that I had after being kept in the solution for about a month became so weak that it was unfit for use. Some recommend putting the catgut in a weaker solution of *iodine* half per cent. after the eighth day, but I have not tried this.

I have seen several articles calling attention to the long-known but apparently forgotten fact that as an antiseptic and disinfectant *iodine* is far superior to the much-trusted and much-vaunted corrosive sublimate, though of course in a great many cases it is not applicable—for instance in most eye troubles, as it is too irritating. However I know of nothing

more satisfactory in aborting a beginning corneal ulcer than tincture of *iodine* carefully applied with the end of a fine probe, avoiding contact of the *iodine* with the surrounding cornea. From reports of experiments it seems probable that *iodine* may soon play an important part in hand disinfection and also in disinfection of the patient's skin at the site of operation. By one author corrosive sublimate is condemned as dangerous, because most operators who use it, after immersing their hands in the solution for a length of time utterly insufficient for killing the pyogenic cocci, proceed with the operation under a false sense of security. Thirty minutes is given as the shortest possible time in which the pus microbes (streptococci) can be destroyed by a 1/1000 corrosive sublimate solution, whereas they are destroyed by a 0.02% solution of *iodine* after only two minutes' exposure. A ½% solution is stated to be strong enough for all practical purposes. I notice that Heusner (Barmen) uses for hand-disinfection a 1/1000 solution of *iodine* in *benzin*.

In a very interesting article by Harrington in the *Annals of Surgery* for October, 1904, the *potassium permanganate* and *oxalic acid* method of hand-disinfection is condemned as inefficient. Harrington, after a thorough bacteriological study of twenty-two different antiseptics, found that not one of them acted under two minutes, and most of them only after five. After further experiments he found a solution which would kill carbuncle pus in less than one minute, whereas the quickest of the twenty-two antiseptics previously tested, took four minutes to accomplish she same result.

The composition of this mixture is as follows :—

Commercial alcohol (94%)	640 cubic centimetres.
Hydrochloric acid	60 ,, ,,
Water	300 ,, ,,
Corrosive sublimate	0.8 gramme.

This mixture contains sixty per cent. absolute alcohol, six per cent. commercial (strong) *hydrochloric acid*, and 1/1250 corrosive sublimate.

Bacteriological experiments on the hands of assistants that had been immersed in this fluid gave eminently satisfactory results. The solution is known as "Harrington's solution," and apparently it has won for itself some reputation, as I see that an author in describing a visit to the clinic of the Mayo brothers at Rochester, Minnesota (*New York-Philadelphia Medical Journal*, July 22, 1905) says : "As an antiseptic, Harrington's solution seems to be the favorite, and is used both on the hands and on the field of operation."

Rubber gloves seem to be holding their own in most of the big clinics. However, it is interesting to note that as eminent a surgeon

as Kocher, whose results are second to none, does not consider them necessary. His rule is as follows: "In aseptic operations all assistants must wear lisle-thread white gloves or use bare hands. In septic cases all assistants must wear rubber gloves."

In abdominal cases a good many surgeons seem to favor placing the patient in the sitting posture after the operation or raising the head of the bed twenty-four to thirty inches. It is claimed that with the patient in this position vomiting is less frequent and that there is less danger of sepsis. It might be stated in this connection that a good deal has been written during the past year about the treatment of suppurative peritonitis. There seems to be a growing sentiment against irrigating the entire abdominal cavity in these cases. A great many surgeons think that irrigation helps to spread the infection. The method that seems to be growing in favor and that gives the smallest mortality consists in quick incision, and pelvic drainage with the patient kept sitting for four or five days.

A good deal has also been written of late about the treatment for abscesses that has been advocated for so long by Powell, of New York. The abscess is incised and the cavity thoroughly emptied. The cavity is then filled with ninety-five per cent. *carbolic acid*, which is allowed to remain for a few minutes, after which the cavity is washed out with alcohol and the wound sutured for first intention. This method is spoken of favorably by so many that I am convinced we have not given it a sufficiently thorough trial.

One of the most striking and revolutionary methods that has come into vogue lately is the use of "*iodoform* bone-wax" to fill up cavities left by scraping away dead bone or curetting sinuses. The cavity, after removal of all dead bone or other dead or diseased tissues, is cauterized with a five per cent. solution of *carbolic acid*, then washed out with alcohol and dried. Then the wax, heated sufficiently to become fluid, is poured into the cavity and the wound sutured for first intention. The material consists of a mixture of twenty parts of the finest pulverized *iodoform* and forty parts each of *spermaceti* and *oil of sesame*, which at the ordinary room temperature forms a stiff, yellow mass. When heated the substance becomes fluid, and on allowing it to stand and cool the *iodoform* sinks to the bottom. In order to obtain a homogeneous emulsion, the substance, after being melted by warming, must subsequently be well shaken up and then it is ready for use. This method was introduced by von Moorhof. A description of the technique is given in the *Lancet* of January 21st, 1905. Murphy, of Chicago, states that he has given this method an extensive trial, with very gratifying results.

I suppose most of us have scored failures in attempting to treat that rebellious disease—gonorrhœal rheumatism—and any method that promises a greater degree of success in these cases will, no doubt, be hailed with delight. In a recent number of the *Post-Graduate* (June, 1906), Prof. Eugene Fuller states that in a great many cases of gonorrhœal rheumatism the seminal vesicles form the "absorptive focus," from which the poison is derived. I quote the following from his article :—

"Several years ago I began to open the seminal vesicles, performing my operation, seminal vesiculotomy, where the lesion is intense. Sometimes the sac is found lined with granulomatous tissue, just as the womb may be, and is treated by curettage. Sometimes we find adhesions, and by opening the sac and breaking up the adhesions, healing takes place. In these operations the sexual function is not destroyed and satisfactory improvement is the result. Within the last two years I have been making a study of so-called gonorrhœal rheumatism, ... and have learned that in males in the vast majority of chronic cases the seminal vesicles are markedly involved. I have proved by opening the sac and curing the rheumatism that it was the absorptive focus. I have operated on my thirteenth case, and in all but one the results were very satisfactory."

Many of us have been interested, no doubt, in the reports that have been so frequent of late of the successful use in pneumonia of large doses of *quinine* combined with the tincture of the *chloride of iron*. I have tried this method in a few cases and have been very much struck with the results obtained. From my limited experience I would say that the treatment undoubtedly reduces the temperature, lessens the pulse rate and increases its force and, best of all, makes the patient feel a great deal better. As far as I can judge, though, the treatment has little or no effect on the pathological condition in the lungs, as the physical signs of pneumonia persist as well as the bloody sputum.

The dose of *quinine* usually given is from sixty to seventy-five grains when the patient is first seen and from thirty to forty grains every three hours for the next two or three days. The *tincture of iron* is given in fifteen drop doses three or four times daily. In the few cases I have treated I have given sixty grains of *quinine* as the initial dose, followed by thirty grains two or three times a day, and this has seemed to be sufficient to control the symptoms. I usually give it stirred in a cup of clear coffee, which disguises the taste fairly well.

In this connection some statements made by Yeo in his Manual of Medical Treatment are very suggestive. I quote from the 12th edition, page 608 :—

"We have, ourselves, been led in this way to the conclusion that *quinine* frequently exercises a beneficial influence over the course of acute pneumonias of the class we are considering . . . . We have been led to conclude, from facts observed, that *quinine* is in some degree an *antitoxin* to the toxins of many infective germs, in what precise manner it is impossible at present to say. To call this effect '*germicidal*' is unjustifiable, because it may possibly act in some way quite unconnected with the death of the germs. We have not given *quinine* in the *large* doses advised by Jurgensen and others; but we have always given it in a special manner, which we believe greatly influences its favorable action. We give from 1 to 8 grains every two to four hours, according to the age of the patient and the apparent severity of the attack, and we give it dissolved in citric acid, and then added to an alkaline mixture, so that it is really taken in an effervescing saline draught. We have had abundant reason for believing that *quinine* given in this form has quite different activities from what can be obtained from it in the solid form or dissolved in mineral acids. We therefore regard the adoption of this form of using it as all-important."

Thus we have testimony that *quinine*, either in large or small doses, has a beneficial influence in pneumonia. Strange to say patients rarely complain of *cinchonism* while taking the large doses mentioned above.

It is to be hoped that all the members of our Association who have tried the "*quinine* treatment" of pneumonia will give the readers of the JOURNAL the benefit of their experience.

I notice that the *Journal of the American Medical Association* is very cautious about expressing an opinion on the subject. It prefers to wait for reports of further clinical experience.

THE LEPER ASYLUM AT TUNGKUN.

Dr. JOHN E. KUHNE, M. B. C. M.

It has been suggested that a statement of income and expenditure of the Leper Home at Tungkun, recently published in the Chinese newspapers of Canton and Hongkong might be of interest to the readers of the MEDICAL MISSIONARY JOURNAL, since such asylums for the lepers are still few in this land; and a brief account of the

institution itself may, with advantage, accompany the balance-sheet herewith sent.

The condition of the Tungkun lepers was formerly pretty much as it is in most Chinese cities. They were located near the South Gate, and made themselves a nuiance by wandering all over the place begging. Consequently when proposals were made for the erection of an asylum, where the lepers might be segregated and properly cared for, the business people very readily promised their support to the scheme. A collection was made, and with the help of a Chinese graduate, who lent us a large sum of money to meet the expenditure, we were able to avail ourselves of an opportunity that was offered of acquiring at a low rate a number of fields that were being sold by the government. The deeds of purchase bear the name of the asylum itself, and the fields, purchased for four thousand five hundred and eighty-eight dollars ($4,588), yield an annual rent of six hundred dollars ($600), which is devoted to the maintenance of the lepers. Our acquisition of this property gave the Chinese confidence in our scheme.

Hitherto all had gone smoothly. It was only after we had purchased a suitable site for the asylum at Shan-tam, a small island in the river, and had commenced the erection of houses, that difficulties began. There being no village in the vicinity, Shan-tam had seemed to most of the townspeople an eminently favourable locality for the purposes we had in view; but certain misguided individuals thought otherwise, and deaf to all arguments and explanations, set themselves to excite the neighbourhood against us. They distributed pamphlets all over the country and in the neighbouring towns, spreading lying reports about us and our work, and seeking to bring to nothing the collections that were being organised. They even went so far as to bring open accusations against us, both before the local magistrate and before the Governor-General at Canton.

A few words of admonition from the Magistrate, if he had inspected the locality and seen for himself how suitable it was for segregation purposes, would have sufficed to put an end to the agitation. To allow him to do what might be necessary in this respect, building operations were stopped for a time; but to our astonishment it came to our knowledge that instead of helping us he was secretly encouraging those who were opposing us. Just about this time his term of office expired, and before leaving his post he addressed a dispatch to the Governor-General, Shan Chun-hün, reporting on the disturbances and recommending that the only way to restore peace was to do away with the proposals for a leper asylum altogether. Such was the parting

gift of one who a few weeks previously had written on our collection books a cordial exhortatiou to his subordinates to contribute to the funds of such a useful institution !

Man proposeth, God disposeth. This treacherous action became in God's hand a means of giving a new impulse to His work, which from that time has progressed rapidly and uninterruptedly.

Having obtaiued a copy of the above mentioned despatch, we were able easily to show the fallacy of the arguments advanced against our proposals; and in a lengthy report to the Governor-General we fully explained the whole situation. The result was a direct donation of five hundred taels (Tls. 500) from the Governor-General himself and a strongly-worded warning to the new magistrate, requiring him to maintain order and to help us in every way that we might erect the asylum as rapidly as possible. It was also this far-sighted Governor-General who suggested that the scheme should lie expanded and that provision should be made not only for the lepers of the Tung-kun city but also for those of the whole district. As a medical missionary I should refrain from remarks of a political character, but I am bound to say that I consider the attacks of the Press on the late Governor-General of the two Kwang most unjust.

Thus strongly supported we were able to resume building operations, and at the end of 1905 we threw open the doors of the new home. Five large houses had beeu erected—four for the lepers and one in the centre of the compound for guests and caretakers. The two magistrates, civil and military, and a deputation of the business people atteuded on the opening day and made congratulatory presents. A week later the lepers of the city, about thirty in number, entered into possession of the wards.

Our next step was suggested by the message we had had from the Governor-General. We decided to proceed at once to enlarge our premises by the erectiou of two more buildings—oue a large two-storied hospital to accommodate seventy more male lepers, the other a house to serve as a resideuce for an evaugelist and a store at which the lepers might purchase what they need. The evaugelist is himself a leper from the Sai-on district. He assists in the iuternal mauagemeut of the asylum, and is the zealous teacher of the poor lepers, who gladly accept God's message of love aud the promise of a better life. Forty-two of them, thoroughly well prepared by the evangelist, have been baptised by the Rev. F. Diehl. On the 23rd of July the new buildings were ready, and the lepers of the district assembled at Shek-lung to travel together to their new home, where they found their

HOUSES FOR THE MALE LEPERS.

LEPER HOSPITAL, TUNGKUN, FROM THE OTHER SIDE OF THE RIVER.

The houses for male lepers. Houses for female lepers
Caretakers and guests' house.

A portion of a large matshed used as chapel is seen.

THE TWO HOUSES FOR THE WOMEN.

The Large Ward.

LEPER HOSPITAL, TUNGKUN.

Upper ward in the two-storied building.

evening meal prepared for them by the lepers already in residence. Since July we have had an average of nearly a hundred inmates in the asylum.

Some, chiefly opium-smokers who entered in a very bad state of health, have died; others, able to fish and earn more than we can give them, have left the home, preferring the free life on their boats to the confinement of the asylum; new patients admitted have filled vacant places.

Each leper receives an allowance of $2.50, from which he need purchase his food alone. Vegetables are available for all from a large kitchen garden, free of cost. Clothing, blankets, in fact everything necessary is supplied to them free. We would like to make the food allowance larger, but the state of our funds does not permit us to do so.

In an Editorial Comment, June, 1904, the editor of the *China Mail* advised making some effort to induce the wealthy Chinese to provide the bulk of the necessary amount for any good work among the Chinese.

We have acted on this advice, and the foregoing sketch shows conclusively that the Chinese, when interested in a work, are willing to take their due share in the necessary outlay. From Chinese alone we have received nearly seven thousand dollars ($7,000), and those subscribing are not all wealthy, for hitherto not one Chinese firm in Canton or Hongkong has been asked to contribute.

We are most grateful to Sir Robert Hart, whose interest in the lepers is well-known, for sending us a cheque for a thousand dollars ($1,000), and to the Edinburgh Leper Mission and to the many friends of our work who have, by their contributions, enabled us to carry it on so far.

The statement of income and expenditure, just published in the Chinese newspapers, and accompanying this communication, shows a heavy balance on the wrong side, but it is not to be forgotten that the sum paid for the purchase of the fields, which we mentioned as having been originally lent to us by a Chinese graduate, is included in the deficit.

Tung-kun City, November, 1906.

FIRST STATEMENT OF INCOME AND EXPENDITURE OF THE

INCOME.	Dollar. Cent.
Donations and Exhibition of Lantern Pictures in Germany, 1900 ...	70.52
Do. Geneva, 1900–1 ...	178.25
,, in Germany, 1903–1905	291.34
,, ,, Geneva, 1903–1905	688.66
Collected in Tung-kun City	2,537.93
,, ,, Shek-lung, Tai-ping, etc.	724.50
Missionary Friends in China	124.00
Payment by the Rhenish Mission of a Fund for Lepers deposited by Rev. W. Dietrich	538.82
Sale of Grass Cloth Objects	97.10
Exhibition of Lantern Pictures in Tung-kun	51.92
Sundries	85.33
Officials in Canton	1,472.22
Subscribed by Relations of Lepers	41.10
One Crop on the Island of Shan-tam before the Houses were erected.	17.00
Rent of the Fields, 2 Crops, Year 1904	614.83
,, 1 ,, ,, 1905	239.42
Balance	6,511.00
	$14,283.94

SECOND STATEMENT OF INCOME AND EXPENDITURE OF THE

From the 10th of September, 1905, to the

INCOME.	Dollar. Cent.
Collection in Tung-kun	774.00
,, ,, Shek-lung	381.89
,, ,, Cha-tun	100.50
,, ,, Liu-po	16.50
,, ,, San-on District	87.25
Officials who had not yet subscribed...	281.00
Sir Robert Hart	1,000.00
Through Au Po-po, Esq.	84.50
,, Cheung Tuh-hei, Esq., To-kau	134.00
Do. Chan-tsun	110.00
,, On Leung-kuk, Tung-kun	40.10
,, Lei Kai-fai, Honolulu	50.00
,, Miss B. Kuhne, Germany	46.31
Edinburgh Mission to Lepers, Grant £128	1,345.98
Friends in Germany	458.80
,, ,, Switzerland	93.94
Missionary Friends in China	99.80
One Friend in Carlisle	9.35
Rent of the Fields	605.24
Government Allowance to Lepers, two seasons	164.23
Sundries	46.18
Rent of Rooms in the Home	4.50
Baskets sold	3.46
Subscribed by Relations of Lepers	117.65
Balance	10,908.13
	$16,963.31

LEPER HOME AT SHAN-TAM DISTRICT OF TUNG-KUN.

EXPENDITURE.	Dollar. Cent.
Food and Help to Lepers at Fa-tim-leng from the Year 1901 to the 10th September, 1905	996.56
Collecting Expenses, Printing of Circulars	90.14
Sundries	147.65
Purchase of the Island at Shau-tam	573.16
Plantation of 420 Water Firs	119.00
Raising of a Dam all round the Island and making of a Breakwater	508.74
Purchase of 101 Mow of Fields at Muk-ngau-chau	4,488.89
Expenses connected with the Purchase of same	37.64
Interest paid to the one who lent us the Money, enabling us to buy the Fields	80.00
Purchase of Grass Cloth Objects	43.10
3 Cliches made in Geneva	18.82
A Boat and other Furniture	53.92
Tax paid for the Fields (now remitted)	29.30
2 Ponds with W. C., 2 Wells, Lauding Stage (accounts not closed)	152.19
5 Houses (account not closed)	6,944.83
	$14,283.94

LEPER HOME AT SHAN-TAM DISTRICT OF TUNG-KUN.

End of September, 1906.

EXPENDITURE.	Dollar. Cent.
Balance of last Year, including the Purchase of the Fields, $4,588	6,511.00
Houses erected during the Year 1905 (accounts closed)	2,564.12
2 Ponds with W. C., 2 Wells, Landing Stage (accounts closed)	379.75
Houses erected during the Year 1906, two Matsheds: the one used as Rice-pounding place, the other as a Chapel (accounts not closed)	3,806.28
Food and Help to the Lepers at Fa-yun-leng, end of the Year 1905.	192.20
Board of the Lepers in the Home, Year 1906	1.291.78
Milk, 2 small Pigs, etc.	19.76
Collecting Expenses, Printing of Circulars, Repairs of a House in Shek-lung, Rent, Printing of Accounts in the Newspapers of Hongkong and Canton	302.32
Wages of Caretakers	313.22
Sundries	249.08
Minimax Fire Extinguisher	45.00
Rice-pounding Implements, Furniture, Benches, Mosquito Nettings, etc.	448.23
Medicaments Dressing Material	69.17
Clothing, Blankets	293.75
Building of a Breakwater in Heng-fung-tan to gain new Ground from the River. The new Fields are to be the Property of the Home which has to pay back to the Village 30% of the Annual Rent	393.50
Purchase of one Mow more at Muk-ngau-chau	45.04
Soap Petroleum	17 05
Plantation of Trees	6.18
Purchase of Material to make Baskets	9.30
Interest	6.30
	$16,863.31

SOME LITTLE THINGS THAT HAVE HELPED ME.*

By O. T. Logan, M.D.

"Trifles make perfection, but perfection is no trifle." In our little corner of Western Hunan, during the six years we have occupied it, we have had our problems and are having them. Some of them have been overcome, others will be overcome and some will never admit of solution. I am more and more convinced that it is the person who is master of little things who will make a success as a medical missionary, and for that reason I venture this modest paper.

In operating for pterygium, I have found that the difficulty in bringing together the conjunctiva over the space formerly occupied by the growth is solved by simply removing the speculum that has served the useful purpose up to this stage of keeping the lids apart. After the necessary cutting has been done, the speculum is a great disadvantage. The books should tell us this, but they do not.

Our troubles with the first dressing of entropion operations have been ended by using a couple of narrow strips of rubber protective tissue that has been previously washed and stored in 1-1000 bichloride. This prevents the gauze from sticking to the wound and pulling out the stitches, to say nothing of the bleeding that usually follows without this precaution. It saves a lot of time also and perhaps some temper.

You who have done iridectomies for an optical pupil know how often you get out too much iris. I know of nothing harder to judge than the amount of iris to excise, or rather how to get out exactly the right amount. The question is, after one has taken out too much, Would the vision be improved if the pupil were made smaller by tatooing with India ink? To decide this point, get a good Chinese pen and have some ink rubbed up thick and paint the margin of the artificial pupil until it is the size you want it and then test the vision, holding the lid away from the newly painted area without pressure on the eyeball.

Most of us have the experience of finding that, usually on account of not being able to sterilize our field of operation, our wound has become infected. I have found that best results are obtained by opening the wound fully, removing all stitches if necessary, washing with saline solution and using the old-fashioned lead adhesive plaster cut into strips and sterilized by passing the adhesive surface through the flame to hold the flaps in apposition. This I think is preferable to secondary suturing, as it leaves no chance for the stitches to cut and to cause

* Read before the Kuling Branch of the C. M. M. A., July, 1906.

pressure necrosis. An infected Chopart's operation was soundly well in a month under this treatment. The profession has almost lost one of its most valuable agents in allowing this adhesive plaster to be all but lost sight of. I find it almost impossible to obtain and always send a sample when I buy, otherwise one will get the rubber adhesive—which has its proper uses—or diachylon ointment will be sent. The plaster is nothing but diachylon plaster spread on cloth. For treating ulcers of the skin, either traumatic or so called idiopathic, I have no fear in saying that it stands unique. I have seen a traumatic ulcer of the ankle that caused pain at every step under the gauze dressing made a matter of no consequence in a few minutes by applying this plaster to the cleansed ulcer, superimposing a light aseptic dressing to absorb the slight discharge. The patient was an athlete, and a few hours afterward was engaged in a hard game, declaring that he did not know he had a sore ankle unless one of the players happended to step on the part. This plaster sticks to healthy skin only and protects the new tissue forming on the surface of the ulcer. It has well been called an artificial scab.

The question of drainage of wounds is one that is ever before us. Seldom can we say that there has been no chance of infection in any given operation. Even if our asepsis is perfect—and all asepsis is relative only—we do not know what pathogenic germs may be floating around in the patient's blood current. It has been recently brought to my attention that strips of rubber tissue inserted into the deep parts of the wound and brought out between the stitches afford splendid drainage and can be left in for some time, if necessary, without leaving a sinus that would be slow to heal.

It is a problem to disinfect the instruments that are constantly being used in the dispensary. Some keep a vessel containing water that is kept boiling all the time and drop the instruments in after using. Our way is to wash the instruments and immerse in 95% carbolic acid, which is wiped off or washed off with alcohol. This keeps the instruments sharper and in better shape than the boiling process, and is practically as good for operations one would do in a hurry during an out-door clinic. We keep our carbolic solution and alcohol in large mouth salt bottles. I may say that we never boil a knife, but depend on the above method, even in the most particular cases, believing it to be fully as reliable as the two minute boiling and the knives hold their edges.

Our galvanic battery with the needle attachment for destroying hairs is in very frequent use. It takes time, but many of our Chinese are blessing us for this exquisite instrument of torture which destroys the roots of offending "wild" hairs. In using it, I find it necessary to

stand behind the patient, bracing his head against my gowned body to keep him from jerking the needle out when the current is turned on. After entropion operations, in very bad cases, it will often be necessary to remove a few offending hairs by this method.

Good morning! Have you used tincture of green soap? is a salutation I would make to medical friends. We find it cheap, since alcohol is cheap in China, and it is on our washstand all the time in a bottle, the stopper of which is grooved, so that a few drops may be easily shaken out. It keeps the hands in good shape; the oil it contains preventing the hands from chapping in Winter. It also removes all the bad smells that cling so tenaciously to the hands. In cleansing a field for surgical operation it is almost a necessity. Of course we make it ourselves. We also make our own citrine ointment, using native mercury and oils. We can buy the nitric acid needed for this ointment on the street, but it is cheaper to get it in Shanghai or elsewhere. This ointment, diluted, we find of great use in treating tertiary syphilitic lesions, and we make it up by the half bushel at a fraction of the cost of the same article bought of the supply houses.

I formerly spent much time prying patients' mouths open in order to introduce the stomach tube in cases of opium poisoning, but now, quietly pass the tube through a nostril—if one is small the other will, in all probability, be large enough—and thus save much nervous energy, broken teeth, etc.

The question of hot water supply during an operation is one that is easily met by the purchase of some form of kerosene blue-flame stove. It may be strange to mention this, but I have met a number of doctors who have not been on furlough recently and do not know the value of these stoves. We find them invaluable, and with reasonable care, they are very reliable.

I do not know how we should get along without our Berkfelt filter. Sterile dirt may be harmless, but one has made a big stride toward asepsis if he filters the water he uses in operations through a germ proof filter. I would warn against the small hand filters, as they are too slow. One needs to spend about $40 to get a useful filter.

I have recently written an article for the MÉDICAL MISSIONARY JOURNAL on the Drop Method of giving ether. It has conserved our stock of this matchless anæsthetic, saved the patients a good deal of discomfort and rested our hearts during the operations, and so I mention it here.

One of the most helpful discoveries I have made is that it is not the *work* in the dispensary that tires one so much, but that it is the talking.

I pride myself on a good working knowledge of Chinese, but I find that even a native needs to ask the patients, as a rule, many times, often varying his inquirers, in order to get their symptoms, and the same process is necessary in giving the directions for the medicine, diet, etc. I now have what I call a "talking assistant," whose business is to do the fag of talking. I merely ask the patient once about his symptoms, and the talking assistant understands that if I fail to get immediate and satisfactory answers, he is to do it for me. I would not recommend this plan for new comers, for they need to pass through the tiresome grind of asking and listening, and the talking assistant would be a crutch to them that would hinder their ever being able to stand alone in the language, but to those who find that their years in China have taken the snap and spring out of them and who are inclined to dread dispensary days, I would commend it most heartily.

I have lately been on the verge of bankruptcy. It happened this way: we have several cases of hookworm infection every year, and it has been my plan to search for these worms in the stool that is passed after the thymol treatment. It is not a pleasant task, so I delegated it to our hospital coolie, promising him twenty cash for each worm he found. My plan had been to wash the stool through a sieve and then search among the residue, but the coolie simply placed the stool in a large pus basin and added water, pouring off the top sediment until only the heaviest part remained, which his scientific mind told him would contain the worms. He came to me with seventy odd hookworms, adding the information that there were plenty more, but he did not trouble to pick them out; whether out pity or a knowledge of the extent of my assets I have not yet ascertained. I have never been able to get the consent of my olfactories to pick out more than twenty of these worms in previous cases, but the coolie, without effort, far outstripped me—and yet some will still insist that the Chinese are an inferior race! Well, I sent my precious worms to Dr. Stiles, Chief of Division of Zoology, Washington, and he told me that, so far as he had examined them, they were *Necattor americanus*, or the American hookworm, whose chief difference, as I understand it, is that the hooks of the mouth are not so formidable as the Old World hookworm, *Ankylostomum doudenale*, and are consequently more easily expelled. It would seem that Americans are bound by some hook or crook to get a hold in China, even though the Chinese have to bleed for it.

We have all had the delightful task of examining fresh sputum for the tuber bacillus. The platinum loop fishes up anything but the small grey bodies we want. I have found that the plan of mixing the sputum

with equal parts of 1-20 carbolic—you know it is good form to say phenol now in our country instead of carbolic—and allow it to stand in a warm place for some hours after thorough shaking, the grey masses will drop to the bottom and the sputum will lose its elasticity and incidentally its malignant nature and render the task of examination quite easy. Gabbett's stain does away with all heating and decolorizing and is as reliable as it is simple, except in rare cases, where the smegma bacillus has to be taken account of. The stain must not be kept too long, as it, like other stains, loses its differential powers after some months.

We have a skylight in our surgery, but I have found that some cases of iridectomy for optical pupils can be better done by using artificial light and a condensing lens. The so called Angle Lamp has been found very satisfactory in our practice, as it gives a large flame and casts shadows. The lamps are to be obtained from well known supply houses in the States at a reasonable price.

I would not close without giving my testimony to the help that I have received from the official JOURNAL of our profession. It has helped me more than I can tell by its articles from my fellow-missionaries, and the writing for it that I have done has been one of the things that has kept me from falling, I trust, utterly behind in the ranks. I would be glad to see my name in this JOURNAL less frequently, because others had written articles that would crowd mine out, but I get such hearty thanks from the editors—and I want it understood that I am not vain enough to think that it is because of the merits of the material sent in but on account of the need the JOURNAL has for matter for its pages—that I am constrained to report some of the 6,000 cases we see annually. In passing, let me urge the brethren to support this JOURNAL. It needs you and you need it. If one does not report what he sees, his eyes will grow so dim that after while he will see nothing.

The *Journal of Tropical Medicine* has been a great help to me. The extracts from this periodical are so boiled down by our home journals that there is nothing but sediment left. It costs a good deal, and I used to think I could not afford it, but now I find that I cannot afford to be without it. An illustration of its value. I had scarcely read one of last years's copies describing the new blood fluke—*Schistosoma japonicum*—until I found a case among the dispensary patients, and later we found another who has been treated in our hospital with most gratifying results. I find it to my advantage to subscribe for but one medical journal that covers the whole field and to carefully read it

rather than try to read several. This gives me all the important advances in general medicine and leaves some time and money to study the periodicals that apply more specifically to our sub-tropical field.

What is food for me may be poison for you, but I venture these remarks for what they may be worth.

LEAFLETS ON HYGIENE IN CHINESE.

A few months since the Central China Medical Missionary Association decided to prepare and publish a series of pamphlets on various diseases. The large number of patients who visit our dispensaries makes it quite impossible to either carefully, clearly or fully give to each one the necessary instructions as to what they ought to do and more especially what they ought *not* to do. Even if time and patience permitted one to give such instructions, the probability is, they would be forgotten, or misinterpreted, long ere they arrived home. It is needless to enumerate instances. We are attempting in some degree to overcome these difficulties in publishing brief pamphlets written in easy colloquial. Our *modus operandi* is as follows: Various members either offer, or are requested to write in English a tract on a suggested subject. This is circulated amongst the other members, who are requested to write their criticisms on an appended sheet of paper. Then they pass on to the appointed English editor. From him the tract is returned to the author, who translates it into Chinese and finally, it is committed to the merciful judgment of the appointed Chinese editor.

The following list of pamphlets are now in preparation and will shortly be ready :—

(2). Instructions in Dysentery, Diarrhœa and Constipation.
(3). Warnings in Syphilis.
(4). Instructions in Small-pox.
(5). ,, ,, Scarlet Fever.
(6). ,, ,, Cholera.
(7). ,, ,, Contagious Skin Diseases.
(8). ,, ,, Bright's Disease.
(9). ,, ,, Marasmus in Infants.
(10). ,, ,, Dyspepsia.

免傳染肺癆症之法

此症傳染最很爲害甚大人萬不可沾染傳染之由是因病人所吐之痰乾時經風一吹遂散成粉別人口鼻吸之卽成此症故此特將防備之去開明於下〇第一吐痰不可在屋裏或路上車船等處〇二吐痰要用杯子或盒子放燒紙在內用後取出痰紙將火燒了他每天如此最不可丟在地上或外面各處〇三吐痰之盒子或杯子每日要用開水洗淨〇四病人要用紙做手巾抹嘴抹鼻子用後亦要燒了他〇五這痰若不吐出或嚥下肚子和別處恐生此病〇六病人屋裏不可常將門和窗戶關閉每天要用開水洗地板並用濕帕子洗淨灰塵〇七病人不可與別人同房住宿〇八病人所住之房子若空出別人來住必要把壁皮門扇地板都洗潔淨〇九病人不可和別人親嘴因爲極易傳染〇十病人咳時須用紙巾遮着口鼻以免痰氣冲入別人口鼻之內用後亦要把紙巾燒了他〇十一病人吃外國上等盒子牛奶最好若吃中國鮮牛奶要煎過一刻鐘再吃〇十二病人飲食要不離葷或吃猪油和各樣的油必須加重一點若能格外吃魚肝油更好〇十三病人常常吸清氣常見陽光身上宜穿毛衣故不可不小心〇十四不可食鴉片煙因食後痰不能吐大有害處

Space for name of hospital etc.

MEMBERS OF THE CENTRAL CHINA M. M. A., WITH THEIR WIVES, NURSES AND FEW FRIENDS 1906

Back Row:—Dr. Ruth Massey; Mr. J. Stewart, Dr. P. L. McAll, Dr C. W. Somerville
Second Row:—Rev. W. Rowley Dr. H. R. Vickers; Sister Mountford, Miss Calvert; Mrs. Huntley, Mrs. Hodge.
Third Row:—Mrs. McAll; Dr. J. MacWillie; Dr. Beckthanet, Dr. Mary Glenton; Dr. Cousins; Dr. S. R. Hodge.
Front Row:—Dr. G. A. Huntley; Miss Higgins; Mrs. Tatchell; Miss Cropper, Dr W. A. Tatchell

(11). How to use a Liniment.
(12). ,, ,, ,, ,, Gargle.
(13). ,, ,, ,, an Eye Lotion.
(14). ,, ,, take Internal Medicine.

The idea is to have some, or all, of these tracts in the dispensary and give to the patient the one necessary for his or her instruction. The first one published I enclose to you, i.e., (1). "The Prevention of Consumption."

We are also having large posters printed of this tract to place in tea shops, on boats, in godowns, offices, etc., etc.

As our Association is desirious of helping others, and as we have had several enquiries about these tracts, we are willing to supply any who would like to purchase the enclosed tract on consumption at the following rate: One thousand copies for one dollar, with name of hospital printed in reserved space. This does not include postage. We are not doing this for any profit, but only to extend our medical work in China and educate the people in the way they should go. All orders to be sent to me. Any further information will be gladly given.

W. ARTHUR TATCHELL,
Hon. Secretary, C. C. M. M. A.

Wesleyan Mission Hospital, Hankow.

CENTRAL CHINA MEDICAL MISSIONARY ASSOCIATION.

To a recent meeting of the above, held at Han-yang, the foreign nurses, wives of the doctors and several friends were invited to attend. A most thoughtful, suggestive and helpful paper was read by Dr. John MacWillie on "The Spiritual Aspect of our Work." After the paper a very profitable conversation followed, during which many valuable and practical suggestions were made.

We were all invited to take tea in the garden, by the President and his wife—Dr. and Mrs Huntley.

The accompanying photograph was taken during the afternoon.

W. A. T.

Medical and Surgical Progress.

Pathological Notes.

Under the charge of JAMES L. MAXWELL, M.D.

SPIROCHÆTES IN CONGENITAL SYPHILIS.

Beitze records his results of investigations in congenital syphilis. No spirochætes were found in four out of nineteen cases, while in one, a case of osteo-chondritis syphilitica, one doubtful example alone was found. In a few cases the spirochætes were found in small numbers, chiefly in the liver, while numerous examples were met with in four or five other cases. He points out that in the four cases in which he failed to find any of the micro-organisms, he only employed the smear method, and thiuks that these negative results are therefore not of great importance. With regard to the question whether spirochæte pallida is ever found in cases other than syphilis, it is impossible to answer definitely at present, but up to now he has not come across a single instance of it in the tissues of a non-syphilitic subject.

P. Hollaender writes in the same number on the detection of Sihandinn's spirochæte pallida in a case of congenital syphilis. This case presents some interesting points. The child had been born in the maternity hospital of Geneva and had died a few hours later. The diagnosis of congenital syphilis was confirmed by the changes in the spleen, in the bones, by interstitial pancreatitis and by thyroiditis. No spirochætes were found in the lungs or spleen, while larger or smaller numbers of them were found in the kidneys, adrenals, liver, placenta and umbilical cord. Enormous numbers were found in the pancreas and thyroid. The spirochætes were seen chiefly in the connective tissue, in the walls of the vessels, and especially in the capillaries. The fact that they were present in the placenta appears to him to have considerable importance with regard to the question of the etiology of congenital syphilis.—*Berl. Klin. Woch.*, June 11th, 1906.

THE BACILLUS OF BERI-BERI?

Leonard Dudgeon, bacteriologist to St. Thomas Hospital, London, has been investigating the bacilli derived from the duodenum and isolated from the fæces by Hamilton Wright in cases of beri-beri.

The results which are unfavourable to Hamilton Wright's claims are summarized as follows, in the conclusions which Dudgeon gives to his paper :—

1. From the investigations which I have made it seems probable that the bacillus isolated from the duodenum and that isolated from the fæces are one and the same organism. The only points of difference are slight variations in their morphology and that one of them acidifies lactose and the other not.

2. There was nothing in this investigation to show that the organism of Hamiltou Wright is related to beri-beri. It has been found to be non-pathogenic to mice and guinea-pigs, and the serum obtained from three cases of beri-beri during various stages of the disease, failed to produce any agglutinative reaction on this bacillus.

Of course one must be fully alive to the fact that although this bacillus is non-pathogenic to mice and guinea-pigs, and did uot agglu-

tinate when tested with the serum of three cases of beri-beri, it may, yet, be the cause of the disease, but this seems to me improbable.—*Journal of Tropical Medicine*, September 1st, 1906.

THE EFFECTS OF RAT EXTERMINATION ON THE INCIDENCE OF PLAGUE IN A SELECTED AREA IN AZAMGARH CITY.

Walker, J. W., Capt. I. M. S., draws special attention to the fact that plague epidemics, in smaller towns at all events, seem to be particularly severe in alternate years. The experiment of killing rats and mice by baits consisting of bread sprinkled with the "Common sense rat extermination" was carried out in the south-eastern district of Azamgarh. The result, when the epidemic of plague reached the city, was satisfactory, inasmuch as thirty-two cases were recorded against one hundred and thirty-three in the north-eastern quarter, where no steps against rats had been taken and where the people lived under much the same conditions. A point observed in the rat-free area was that cases imported thither do not give rise to the series of infections to be seen in places where rats abound. The investigation was carefully and scientifically carried out.—*Indian Medical Gazette*, July, 1906.

THE INFLUENCE OF LIGHT-HUNGER IN THE PRODUCTION OF PSORIASIS.

A paper with this title was read at the annual meeting of the British Medical Association at Toronto by James Nevins Hyde, A.M., M.D.

Dr. Hyde advances a number of propositions in support of his case. They are:—

Proposition 1.—Psoriasis is a disease that never affects the lower animals, whether these be feral or in a state of domestication, for the reason that the integument of such animals is very rarely screened from the light by artificial covering.

Proposition 2.—If psoriasis in man be an expression of resentment on the part of the skin against the partial or total exclusion of light from its artificially covered surfaces, it is clear that the number of persons whose skin is thus abnormally sensitive is relatively small.

Proposition 3.—If psoriasis be a resultant of light-hunger in the skin of certain abnormally sensitive subjects, because of the greater or less degree of exclusion of light resulting from artificial covering of the body, the disorder should be most prevalent and most severe at those seasons of the year and in those countries in which sunlight is least abundant.

Proposition 4.—If psoriasis be a resultant of light-hunger in the skin of certain abnormally sensitive subjects, because of the total or partial exclusion of light from protected portions of the body, the localization of the disease in the integuments should be largely determined by the regions of such exclusion.

Proposition 5.—If psoriasis be a resultant of light-hunger on the part of the skin of certain individuals because of the greater or less degree of exclusion of light from the covered portions of the body, the effective treatment of the disease would be by illumination of the regions chiefly involved.

Dr. Hyde brought forward a good deal of evidence in support of his contentions, but in the discussion which followed the reading of his paper, it was evident that his views hardly met with general approval.

THE VALUE OF CALCIUM IODIDE IN THE TREATMENT OF ULCERS.

In the *British Medical Journal* for July 21st, 1906, there is an interesting paper by Dr. Stephens, of Swansea, on this subject.

Calcium iodide in doses of 2-4 grains produced an almost immediate improvement not only in ordinary ulceration, where the thick callous edges may quickly become thin healing ones, but also in the case of syphilitic ulceration, where *potassium iodide* had disagreed.

THE REMOVAL OF UTERINE MYOMATA.

In the *Journal of Gynæcology and Obstetrics*, London, August, 1906, there is a report by Dr. McCann of some of the proceedings of the Fifteenth International Medical Congress, Lisbon.

With regard to the technique of operation for the enucleation of uterine myomata by Tuffer and Rouville the following may be quoted as being of great interest to those who undertake abdominal surgery.

If possible the uterus should be pulled out of the abdomen, but this is not indispensable. The number and position of the fibroids and the position and condition of the uterus must also be known.

Two conditions may be present :—

(1) The uterus forms a globular tumour, in the centre of which a harder body is felt more or less easily defined; sometimes only an enlarged uterine body is felt. The uterus is incised along the anterior wall as near as possible to the median "avascular" line, just below the fundus. The incision is deepened until the fibroid is seen. This incision should be large enough to permit easy exploration of the neoplasm, and is enlarged to allow the passage of the largest diameter of the tumour. The lips of the incision are separated, neither ligature nor forceps being necessary. With hooks and the spatula the fibroid is then easily extracted. If the fibroid is lateral the hysterotomy should be made as near as possible to the middle line, and the tumour attacked from within outwards. Securing the median situation of the uterine incision in the "avascular" line, and attacking the tumour from within outwards, appear to be the important points in this method of operating. On these depend the simplicity and ease of the operation, and they afford the best means of avoiding hæmorrhage.

(2) The intra uterine tumours are multiple. Here the same principles are adopted, but the median "avascular" line of the normal uterus becomes lateral and sinuous. The fibroids are successively dealt with from within outwards and as far as possible through the same median incision ; even if there exist a fibroid of the posterior uterine wall it can be reached through the cavity. Where the tumours are far apart and are multiple, anterior or posterior incisions are practised. The fibroids are successively enucleated without a single ligature being necessary. A simple tampon left during the operation as a rule suffices to arrest hæmorrhage ; where veins bleed the application of forceps is enough.

After enucleation it might be imagined that a large cavity is left in the uterine parenchyma, but this is not so. The uterine muscle contracts and retracts, as in the Cæsarean operation, and the loss of substance is of little importance.

Except in the cases where a fibroid, partially interstitial and subperitoneal, is adherent to the serous surface of the uterus to a large extent, and where the serous

covering is resected, the uterine shell is not touched, and the authors content themselves by obliterating any pocket which may exist.

Sometimes the uterine cavity is opened either deliberately—as in reaching a fibroid in the posterior wall—or accidentally in enucleating a tumour partially submucous and adherent. Boursier has advocated the systematic opening of the cavity in order to curette the uterine mucosa. The authors consider this practice unnecessary, and to a certain extent dangerous, because it affords some chance, even if slight, of contaminating the wound. They, however, consider it an accident of little importance when care is taken to disinfect the vagina and dilate the uterus; besides which it is easy to pass a tube for drainage.

The operation is different according to whether the uterine cavity is open or not. If not opened the operation is aseptic, but if opened there is always the chance of contamination, and it is necessary to drain the uterus. In cases where the operation has been very long, a gauze wick is placed in Douglas's pouch. The uterine wound is sutured in the same fashion in each. It will therefore only be necessary to indicate the principles, namely, suture of the uterine parenchyma with buried catgut sutures as closely together as possible, and suture of the serous membrane with linen thread inserted with a round needle. If care be taken to obtain apposition and to avoid the mucous membrane the sutures suffice to arrest hæmorrhage. In some exceptional cases it is necessary to ligature one or two bleeding vessels.

The authors insist on the importance of perfect hæmostasis in preventing untoward results after operation. It is necessary to make sure that all bleeding is arrested before closing the abdomen, and in doubtful cases to drain.

ENUCLEATION OF THE PROSTATE GLAND.

Two valuable papers have recently appeared: one by Sir William Thomson (*B. M. J.*, July 14th, 1906), one by Nicoll (*B. M. J.*, August 11th). In both the progress of surgery in the matter of dealing with prostatic obstruction is noted. Prostatectomy may be performed by either the suprapubic, the perineal, or the perineal and suprapubic route combined.

In both it is noted that the removal of a portion at least of the prostatic urethra does not seem to militate against the success of the operation.

Nicoll describes his way of arresting haemorrhage, if severe, by means of a gauze bag stuffed with gauze drawn into place by means of a catheter and moistened in situ by the application of *adrenalin* solution through a syringe and tube. Thomson is clear that the suprapubic method is in most cases the best. He also describes his mode of washing out the bladder after operation, firstly through a large tube in the suprapubic wound and secondly by means of a stream of fluid sent down the urethra by means of a glass syringe. As to primary hæmorrhage he gives the patient doses of *calcium chloride* for a day or two before the operation and points out that in case of troublesome hæmorrhage from an enlarged prostate, this may be arrested and the patient at the same time relieved by enucleation. The dangers of the operation besides those attendant on the condition for which the operation is undertaken, are: first, sloughing of the wound; secondly, the formation of recto vesical fistulæ; third, extravasation of urine.

Thomson also warns the reader of the dangers attending the Treudelenburg position in these old patients in whom it should be used as little as possible.

Hygiene, Hydrotherapy and Physiologic Medication.

Under the charge of K. C. WOODHULL, M.D.

HYDROTHERAPY IN PNEUMONIA.

People with gray hair are generally the ones most interested in pneumonia, for pneumonia is a disease from which they have much to dread. It is a disease which is especially dangerous to elderly people. More people of sixty or seventy years of age are carried off by pneumonia than by any other malady.

With the young it is different. The chest can expand; even if one lung is rendered useless by pneumonia, the other can do the work of two, just as one young man can do the work of two for a short time in an emergency. But with the elderly person the ribs cannot expand. The patient dies of suffocation.

What shall we do for pneumonia? This is a very important question. Here is a congested lung—an organ within the body that has too much blood in it and is invaded with germs. Now the blood is not destructive, nor is congestion a destructive condition. The germs are the destructive agents. The purpose of the blood is to destroy the germs. The lungs become passively congested, so the blood does not move on. It goes into the lung, fills it up and stays there. The germs are outside the blood vessels in the tissues attacking the lungs.

Within the blood vessels are the white blood cells, which are constantly seeking out the germs and destroying them. Though apparently having no organs of sense, these cells seem to smell the germs from afar. They pursue the germs in no uncertain manner, pass through the walls of the blood vessels into the tissue, proceed directly to the spot where the germs lie, and immediately absorb them, actually devouring and digesting them. These little white cells are the policemen, swarming into the affected part from all the distant parts of the body.

So then the thing that is necessary is to facilitate their work of cure. Nature is pursuing pneumonia germs to destroy them. That is the whole thing in pneumonia—to kill the germs. Take a drop of blood and examine it. These white cells will be found present in large numbers. Ordinarily there are only 7,500 in a drop, but the next day, after one is taken with pneumonia, there may be 25,000. The second day there may be 50,000 and the fourth day there may be 125,000 in a little drop where there were only 7,500 at first. In three or four days they are multiplied in the body until there are ten, or twenty, or even thirty times as many as four or five days before. Why? They have been multiplied. They have been created in the body to meet the emergency. What a wonderful thing that is! The same power that makes them made man. The same power that made the first man and the first woman, the first tree, the first flower; and that same power is creating within us to-day. That is the only thing that saves us from death—this process of creating all the while. That is the only way for the sick man to get well—to be recreated. We frequently hear persons say they are going out for a little recreation, but do we always stop to think what that word means? It does not mean merely having a little pleasure. Recreation means being made over anew, being recreated, and that is the whole process of getting well.

These little white blood cells get opposite the germ on the other side of the vessel wall, then pass through the wall, and are led by a marvelous intelligence to the spot where they

are needed. There they pounce down upon the germs and destroy them.

The thing of importance then is to keep a stream of blood flowing through the lungs to preveut stagnation. When there is stagnation the patient gets blue in the face, the lips get blue, the patient is short of breath. Poisons accumulate in his blood—*carbonic acid gas* or *carbon dioxide*. The blood must be moved through the lungs faster. Right there is where the great power of hydrotherapy comes in, the power to control the circulation of the blood in the interual organs. The congested lungs are all dilated and paralyzed by germ poisons and full of blood. A compress made by wringing a towel out of cold water is put over the chest, and the patient gives a little shiver. His muscles contract. This makes the lungs contract and causes him to take a long breath. The blood vessels contract and force the blood right along, just like the hand on the bulb of an atomizer. When the vessel walls contract they force the blood along. The compress gradually gets warm and the vessels widen again. Then another cold compress is applied; the vessels again contract; they send the blood along again and more new blood comes flowing in.

Not very loug ago a certain doctor examined the records of the Boston State hospital for the last sixty years and summed up the results of the treatment of pneumonia in the State Hospital, Boston, Mass., and he found the mortality to be thirty per cent. Three hundred patients out of every thousand died. How many should bave died? Not more tban ten, or twenty, or thirty at the most. Two huudred and ninety or two huudred and seventy at least of these people ought to have been saved alive and doubtless might have been saved as well as not.

A lung compress half an inch thick and large enough to cover the eutire frout of the chest should also be employed in the treatment of pneumonia. The whole lung must be treated. For the back part of the lung a towel should be wrung out of real cold water, placed on the back and covered with a piece of mackintosh which, in turn, is covered with flanuel. The flannel should be large enough to go around the chest and over the tops of the shoulders as well. If a flannel just suited to the case is not obtainable, there is nothing better than a pair of woollen drawers. The upper part will cover the chest and the rest will go over the shoulders, the two legs will go over the shoulders, cross behind, come around and cross in front. That is just the best kind of arrangement, and one can always fiud that kind of compress in the house.

The ice bag is not as good as the cold compress, because it sometimes chills the patient. It does not get warm but remains cold, aud if kept very long in one place that place becomes numb. So long as the compress feels cold, it is doing good, but wben the skin becomes numb there is no reflex effect. The cold compress is by far the best application.

When a patient has too much blood in his lungs, it is a very good thing to get part of the blood down into the lower extremities. So every three hours the patieut must be wrapped in a hot leg pack. The compress is kept upon the chest and the bot blanket pack comes up to tbe umbilicus. The blanket is wrung out of hot water and the patient is wrapped in it for fifteen minutes or twenty minutes; then rubbed with a towel dipped in cold water and the legs wrapped with a towel wrung out of cold water and covered with mackintosh and flannel. This is kept on three or four hours or until the next pack. Wet packs

on the legs should be kept warm. They must never be allowed to get cold for a minute. If necessary hot bags must be placed around them. They must be put on cold, allowed to warm up; then kept warm by blankets wrapped around them. This will send the blood down into the legs. It is astonishing how the cough may be relieved by those packs on the legs and the compress on the chest. Should the patient suffer much pain, the heating compress, or cold compress, should be removed every hour and a hot fomentation applied over the painful part for about five minutes. This will give relief. Then the cold compress should be replaced; after the temperature falls, the cold compresses are replaced by heating compresses, which are changed every three hours. Sometimes a lung becomes solid in pneumonia. The patient is given hot and cold three times a day in those cases; first just as hot a compress as the patient will bear for fifteen or twenty seconds, then very cold with an ice compress. These are alternated every fifteen seconds for fifteen or twenty times. A hot and cold spray is better still.

If the patient's temperature is high a wet sheet pack should be given. The sheet must be wrung quite dry out of water 60° or 70° and wrapped tightly about the patient. First it is wrapped clear around the body with the arms held up, then the arms are lowered to the sides and the sheet goes around the arms. At the legs one edge is tucked in around one leg and the other edge around the other leg. Then the patient is wrapped up snugly in three or four blankets. (The blaukets should be placed on the bed first; the wet sheet upon these.) In about fifteen or twenty minutes the patient will be quite warm. He shonld be kept in there until well warmed up, half, an hour, or an hour. If the patient shows a tendency to perspire, that is a most encouraging symptom. Let him sweat; that will bring the crisis of the disease, and from that moment he will be better. The temperature will drop and recovery will be rapid.—J H. KELLOGG, M.D. *Good Health*, May, 1906.

Progress in Internal Medicine.

Under the charge of EDWARD H. HUME, M.D.

TROPICAL SPLENOMEGALY.

It is a matter of common observation that in additiou to the prevalence of the more common varieties of this condition in temperate climates there are cases preseuting well-defined features, not seen in temperate climates, and generally included under the term tropical splenomegaly. Leishman's discovery, though helping to solve the etiology of a large number of these cases, yet cannot be said to have done away with the need of further study, for the Leishman body is uot to be found in every case. Musgrave, Wherry and Woolley (*Johns Hopkins Hospital Bulletin*, January, 1906) report seven cases seen in the Philippine Islands of the symptom complex variously known as tropical splenomegaly, kala azar, dum dum fever, kala dunkh, etc. The distinguishing characteristics of this disease are: (1) the prevalence and character of the fever; (2) the toxic disturbances; (3) certain gastro-intestinal phenomena, and (4) changes in the skin. The striking feature about the seven cases reported, from an etiological standpoint, is that in none of them was there trace of malarial parasite, Leishman body, or bacterial infec-

tion, whether examined during life, as six of the cases were, by splenic puncture, or as in one case, by careful post mortem search, both by culture and section. The following important clinical summary is given: (1) Age. Young people from fifteen to twenty-five seem to be most susceptible. (2) Invasion. "The disease is almost invariably ushered in by an attack of remittent or intermittent fever, which clinically resembles malaria or dengue, and is accompanied by enlargement of the spleen. Recurrent exacerbations of fever at irregular intervals occur throughout the course of the disease. This fever is not influenced by *quinine*, and, in the Philippines, is recognized by the natives as a 'cayana' or 'quisig' and is held by them to be a distinct disease from malaria." (3) Course. On account of the almost complete lack of medical attendance, it is hard to determine this point; "however the laity consider the disease as a very fatal one and often of very short duration, but more often chronic; the patient living for several or many years." (4) Clinical Features. "The spleen usually enlarges quite rapidly, reaching its maximum size by the second or third attack of fever and then very often no further change occurs, unless the idea of the natives is correct, that the organ grows harder. The liver may or may not be enlarged, but when it is, that change is secondary to the splenic enlargement. Jaundice, usually slight, but also well developed, is often present, sometimes even in those cases without enlargement of the liver. This fact accounts partly for the muddy pigmented appearance of the skin and mucous membranes, which is so commonly seen. There seems to be a special tendency to involvement of the mucous membranes in this disease. This is shown by the frequent gastro-intestinal disturbances, conjunctivitis, etc. The natives say that it also causes discharges from the vagina and sometimes also abortion. There is also a tendency to hemorrhages in both the mucous membranes and the skin. Three of our cases had epistaxis and bleeding from the gums. One showed hemorrhages into the conjunctiva, and two, old cutaneous remnants of hemorrhages. This tendency may be explained in some cases by the jaundice. Œdemas, at first transient and later more marked and persistent, are common occurrences and are more common on the legs and face. Ascites and pulmonary congestion may also be remarked. Anemia, emaciation, and cachexia develop gradually in nearly all cases. Pain is a frequent but by no means a constant symptom. It is manifested by headache, arthralgia and myalgias, and is apparently more common in the early stages of the disease."

It is to be noted that on no occasion was the fever in any of the cases influenced by repeated cinchonization.

PREVALENCE OF INTESTINAL PARASITES IN SIAM.

In view of the increasing attention being paid in China to infections with animal parasites, and further, in view of the important paper contributed from the Philippine Islands by Musgrave last year calling attention to the frequency with which amebic dysentery there could be traced to infection with amebæ found inhabiting the skins of fresh fruit, the study from Siam by Woolley (*Journal of the American Medical Association*, October 6th, 1906) is most suggestive, all the more so because of the proximity of Siam to China. Dr. Woolley, on going from Manila to Siam to take charge of the Government Serum Laboratory there, was

told to his surprise that amebiasis was rare there. Obtaining permission to visit the government prison at Bangkok, he commenced a series of examinations of the stools of prisoners. Although not allowed to examine any but the stools of such prisoners as were sick, he was able to get interesting results. Each patient was given an ounce of *epsom* or *rochelle salts*, and the fluid fecal matter was collected in perfectly clean porcelain dishes with covers and examined in a perfectly fresh condition. The series consisted of fifty patients, and the infectious noted are tabulated as follows:—

Total cases with intestinal parasitic infection, eighteen.

Amebae		11	cases
Uncinaria duodenalis	(ova) ...	4	"
Tricocephalus dispar	" ...	4	"
Strongyloides intestinalis	" ...	3	"
Opiscorous sinensis	" ...	3	"
Ascaris lumbricoides	" ...	1	"
Hymenolepis nana	" ...	1	"

Contrary, then, to the report I had received, amebas are not infrequently found in the stools of natives of Siam. Moreover it cannot be said that these amebas are of the non-pathogenic type, if such there be. At least three of the patients examined were suffering from a true dysentery and others had more chronic or subacute symptoms. Of fifty cases examined thirty-six per cent. presented infections with intestinal parasites, and of eighteen cases infected, sixty-one per cent. showed amebas. Dr. Woolley notes that some of the patients were Chinese, and the conviction is forced home that more systematic examination of stools would result in more intelligent treatment of the many intestinal conditions brought so constantly to our notice here.

YELLOW PATCHES IN TYPHOID.

Minciotti (*Gazetta degli Ospedali*, Milan, Vol. XXVII, No. 33, 1906) writes further concerning Philipovicz's symptom in typhoid fever. This consists in a yellowish discoloration of palms and soles, and is regarded by Philipovicz as pathognomonic of the disease. In one of Minciotti's patients the yellow patches were painful. "The symptom was most marked in the left palm and sole. The tint was a pronounced orange and gradually subsided to normal. The pain first attracted attention to the left sole about the eighth day of the disease."

TREATMENT OF TYPHOID FEVER.

At the recent meeting of the British Medical Association in Canada two phases of the treatment of typhoid received special attention, and as the editor of the *Journal of the American Medical Association** puts it, "these may well be called the eternal questions in typhoid fever, the problem of removing harmful infectious material from the intestines and that other ever-recurrent question, What shall the typhoid fever patient be fed?" Both English and Canadian physicians showed that typhoid patients, who are inclined to be constipated, do better than those whose bowels are loose. One distinguished English authority said that "in a large number of cases the mortality among those who had diarrhœa was more than twice as great as among those who were more or less constipated." Furthermore, in view of the fact that patients recover from the disease, gain in weight, and seem to enjoy the best of health, yet may continue to excrete typhoid bacilli for months or years without apparent detriment to themselves; the effort of the physician must not only be to help in the removal of as many bacilli as possible, "but to help nature with the production of that immunity to the typhoid bacilli which eventually occurs in all persons who recover. The few bacilli that might be removed from

* September 15th, 1906.

the intestinal tract by means of purgation, are as nothing to the many millions of these organisms that continue to pass from the system after the patient has become thoroughly convalescent. In securing this object the question of how typhoid fever patients must be fed, becomes important. There is practically universal agreement now that an exclusive milk diet, except for patients who are very fond of milk, and who can take large quantities of it without disturbance, is a mistake. During the first week of typhoid fever, patients rarely crave any food, and only small amounts should be given. As soon as they begin to develop an appetite, however, additions should be made to their diet, and the extent of these additions was the special subject of discussion. Several, even of the most conservative, of the British physicians declared that they considered it advisable to give a patient almost anything he asked for. This is of course to be followed only as far as the more nutritious classes of food are concerned. All kinds of fruit juices are to be permitted, though the greatest care must be exercised in the removal from them of seedy particles or anything else that, failing to be digested, might prove irritant to the typhoid ulcers. Some would allow all kinds of meat if asked for, provided the meat was given in a very fine state of division. It was agreed that it was very difficult to decide just what is the meaning of solid food. Milk unmixed with barley water or with arrowroot will often, in the words of Sir Thomas Barlow, be found in the intestine in large craggy masses, which certainly prove a serious cause of irritation to the typhoid ulcers. On the other hand, finely minced meat will become thoroughly fluid under normal conditions of digestion. In normal circumstances only undigestible food remains in solid condition as low down as the terminal portion of the ileum. It would seem advisable then to feed patients much more liberally, both as regards quantity and variety than has been hitherto the custom, first in order to shorten the stay in the hospital, an important consideration for working men; and second, in order to prevent the sequelæ of typhoid fever, such as abscesses of various kinds and thromboses, which were shown by statistics to be much more frequent after typhoid fever treated with an exclusive diet than when treated with a more generous and varied diet." One cannot escape the conviction that, in spite of the attestations of eminent men who have thus testified, it will require further careful observations in the best hospitals of all parts of the world before the practitioner, who is accustomed to typhoid fever, will allow himself to grant his patient's wish for all kinds of meat. What is said about the unwisdom of giving milk undiluted with gruels does, however, seem bound to become the conviction of all practitioners.

ANTITYPHOID EXTRACT.

V. Jez (*Wiener klinisch-therapeutisch Wochenschrift*, No. 51, 1905) gives a summary of a hundred cases reported by himself and others in which his antityphoid extract was used in typhoid fever. In all but six, where the results are characterized as dubious, the treatment acted most favorably. There are no contraindications to the administration of the extract, which may be given either hypodermically or by mouth. Jez himself gives it by mouth, half an ounce an hour; the total amount being from twenty-four to thirty ounces. The author thinks it causes a distinct amelioration of all the symptoms and shortens the course of the disease from one to two weeks.

The China Medical Missionary Journal.

VOL. XXI. JANUARY, 1907. NO. 1.

Editorial.

THE ELECTION OF OFFICERS.

The following letter from Dr. Neal, and one of similar import from Dr. Christie, express the conviction that the resolution referred to on Page 45, Vol. XIX, was adopted in order that the Association might have the opportunity of electing its officers every three years and at the regular conference. We were in America at the [illegible] not understanding the motive, followed the custom and arranged for the election for the beginning of 1907 as usual. There is, however, no question of doing other than the wise purpose of the Association, nor is there any possibility of any dispute arising out of the matter. The present officers will hold office till the Conference meets, and those who have now been voted for will probably then be regarded as nominated. Here is Dr. Neal's letter, which explains the whole matter. The wisdom of this action on the part of the Association is evident to those of us who know how unrepresentative of the general membership past elections have necessarily been.

TSI-NAN-FU, December 3rd, 1906.

DEAR DOCTOR: The November number of the JOURNAL came last week, and I want to congratulate you on its being more than usually interesting. . . . . .

I write this morning particularly to call your attentiou to the fact that the sending out of ballots for the election of new officers seems to be premature, that it seems in conflict with the action of the Confereuce in 1905. On page 44 of Vol. XIX, among the minutes of the meeting of that Conference, you will find the changes which were to be incorporated in the Constitution and in the revised copy which I possess, and which doubtless you too have in your possessiou. Article V. reads: "The officers of the Association shall consist of....., all of whom shall be elected triennially"; and By-law No. I reads: "The

stated meetings shall he held triennially at the call of the President of this Associatiou."

On page 45, directly following the adoption of these chauges, the following is recorded: "Moved and carried that we request the present officers of the Association to continue in office till 1907."

Now my recollection is that this latter motion was intended to hold the present officers over until the proposed meeting next spring, though I admit it is not so stated in the motiou, which unfortuuately is somewhat vague, and with the intention of having the election of new officers take place at this coming meeting, and thenceforth triennially at the stated meetings, instead of as formerly, hy this most unsatisfactory method of printed ballots. I am very strong in the conviction that the election ought to take place at the stated meetings, and that officers elected then should hold over until the conclusion of the next following triennial meeting, so that they could arrange for the meeting which would conclude their term of office.

It is only for the above reasous that I write you this morning, as it would he unfortunate to have any controversy as to who are to he the lawful officers at the comiug Conference. I shall be only too glad to vote for Dr. Davenport for President, provided it will not complicate the matter at this time and provided he will he in Shanghai at the time of the Conference—he wrote me some time since he expected to go home this winter—but I am inclined to think the election should he postponed until the Conference meets.

Truly yours,

J. B. NEAL.

LEAFLETS ON HYGIENE FOR THE CHINESE.

It is the Central China Medical Missionary Association which puts through most of the best things that are proposed or hinted at by the rest of us. Another instance of this fact, which fact we have mentioned off and on during the past years, is given in the present issue. We refer to the notice of the series of leaflets on hygiene, in Chinese, which they have recently published and offer at cost price and in any quantity to those who are wise and energetic enough to get them and make a practice of using them in every applicable case. We suppose that we might each of us add a whole tenth part to the efficiency of our medical work if we should put this matter in thorough working order in our hospitals and other practice. We should like to see these leaflets issued to

patients by the thousands all over China and urge each and every member of the Association to use them as they are published or as they might he modified to suit our several notions.

Speaking of this suhject, our well-known excessive modesty compels us to resist the temptation to remind those interested that it was in the JOURNAL and editorially, that this idea had its birth. Dr. Stanley issued some time ago a leaflet on tuherculosis, and in our issue of January of last year we urged, "with all our might and main," that someone would make the thing general and put it through. The Central Branch has done so, and all credit he to them, except just a little for Dr. Stanley and our-editorial-selves.

A CHINESE MEDICAL JOURNAL.

But they do not do quite everything. There are a few others, and one of them is Dr. Kuhne, down in Tung-kun. He does quite a numher of things on his own responsibility, and as far as efficiency and breadth of service goes, might set up as a small branch of the Association all by himself. Besides being a good Chinese scholar and a clever physician, he manages to get out the best report of any of us and to put it into English, German and Chinese. But this is nothing. His latest is to edit a really excellent little medical journal in Chinese for those of his and other medical graduates who have had their instruction in Chinese and are therefore unable to follow the progress of professional practice, except through the slow channel of translated medical books. The paper is in its first volume, hut seems to be so sensibly planned and executed as to have every chance of proving a success and living for many a year. We hail our sister medical journal, the second on the field, with the heartiest kind of a welcome and trust we shall ourselves live to see the day when the 西醫知新報 will be the standard Chinese medical journal. It is at present offered to suhscribers at a very moderate price and, although Dr. Kuhne does not say so, we have no douht that contributions to its columns will he gladly received.

CAN IT BE TRUE!

Naturally we are feeling in a very good humor to-day. We have just received this letter from Dr. Beehe, of Nanking :—

November 28th, 1906.

Drs. Lincoln and Jefferys.

My Dear Doctors: Those who are doing the good work you are doing without any compensation, except the joys of service, deserve at least an occasional word of appreciation. You are doing us a great service and doing it very well. Please do not speak of withdrawing—after another term. The Journal needs continuity of editorship. You are the right men in the right place. I hope Dr. Davenport will be elected as president. His modesty, ability and character all fit him for the position this coming term.

Very sincerely yours,

Robert C. Beebe.

Of course he did not mean it to be published, but flesh and blood could not resist. Considering the superlative excellence of the Journal, it may be inferred that we receive this sort of letter t.i.d., but such is not the case. There used to be a time when we had serious doubts as to whether more than ten people in China cared a cash whether it lived or died. But this past year things have showed some signs of promise, and we begin to feel that the day may not be very far off when it will be with a distinct sense of relief that one opens our pages and sees that "that article of mine was accepted after all!"

The first time we ever saw Dr. Beebe, he was the President of this Association and, at the moment, presiding at a medical section of the last Ecumenical Conference. We were ourselves just under appointment to China, and very timidly went up to the "big man" and "introduced ourself." Well, he did the right thing, and we went off satisfied. And now he has done it again. Heaven bless him! He seems just as big a man to-day as then, perhaps a bit more so.

[Signed Editorial.]

ON ANÆSTHETICS.

From time to time one hears much about the dangers of this or that anæsthetic agent, and the advocates and opponents of each are apt to forget that there are two sides to every question. Let us for a few minutes try to look at the matter dispassionately.

First. It must be laid down that statistics are very likely to mislead. To say for instance that so many thousand cases have

taken *ether* without a fatality is useless, unless to this is added a statement that these cases are in absolute sequence, include operations for all sorts of conditions, and that none of the patients have subsequently died, either directly or indirectly, from "*ether* pneumonia." And there are very few, if any, hospitals where *ether* is given as the sole anæsthetic.

Second. In estimating the value of what is called a "*chloroform* death," one must know the full details of the cases. For instance cases with intracranial pressure not infrequently stop breathing and die on the table quite apart from the question whether it has anything to do with the untoward result, and it is manifestly unfair to call it a "*chloroform* death."

The same remarks apply to deaths taking place where *chloroform* is given in order to perform tracheotomy for severe obstruction of the larynx, or for operations on large thyroid growths.

Death may and does take place occasionally without an anæsthetic in the first instance, and under any general anæsthetic in the second, and it is hardly fair to blame the *chloroform* entirely for the untoward result.

Yet again in operations for neglected cases of intestinal obstruction in which death may take place on the table without the administration of any anæsthetic, it is hardly fair that the *choroform* should hear all the blame.

And finally in cases like the following the fatality is due rather to an error of judgment on the part of the anæsthetist in the choice of his anæsthetic, or the surgeon in the choice of his time for operating, than to the anæsthetic itself. Here is a man who has a growth blocking the larynx. In the morning he has stopped breathing owing to obstruction, and has only been saved by a tracheotomy performed on the spur of the moment and followed by artificial respiration. In the afternoon he is brought into the theatre, and dies of syncope before he is fully under the anæsthetic. Here you have a depressant acting on a heart that has already undergone severe strain, and in which an insufficient time has been given it to recover tone. Of the same nature is a case where after a fairly long administration of gas and oxygen, *chloroform* is administered. It is the improper sequence rather than the agent itself which is responsible for the fatality.

Practically speaking one has four general anæsthetic agents at one's command—*nitrous oxide*, *ether*, *ethyl chloride* and *chloroform*—to enumerate them in the order of their toxicity.

The other general anæsthetic agents on the market resolve themselves into mixtures of these with one another or with some outside agent.

Each of these has its special advantages and disavantages. Two are preëminently meant for short operations, viz., *nitrous oxide* and *cthyl chloride.*

Of these *nitrous oxide* is undoubtedly the safest, but in the East is difficult to obtain and very expensive. *Ethyl chloride*, if given with care, to a patient in the recumbent or semirecumbent posture is practically as safe, but should not be mixed with *methyl chloride* and should be treated with respect.

The other two—*ether* and *chloroform*—are meant for longer operations, and although *chloroform* is undoubtedly the more dangerous of the two if carelessly handled, given due attention to detail, it is doubtful whether the disadvantages of *ether* do not greatly balance its greater immediate safety.

Firstly. Ether is very volatile, and in hot countries is difficult to keep. In passing it may be said that this constitutes a serious objection to the use of A. C. E. in South China.

Secondly. At the time of administration it is apt to cause an inconvenient increase in the secretions of the mouth, pharynx, and air passages.

Thirdly. It requires for its proper administration an inhaler which takes up a good deal of room, and is in the way in operations about the head and neck.

Fourthly. It is apt to cause engagement of the vascular system leading to much more trouble with oozing in the operation area.

Fifthly. It is liable to be followed by "*ether* bronchitis," or "*ether* pneumonia," which may tell heavily against the patient, and may actually destroy his chances of recovery.

As to the disadvantages of *chloroform* much has been written. An overdose may be fatal, or if not fatal may cause the operator extreme inconvenience.

In certain cases, which however probably should not have had *chloroform* administered to them, it may cause a sudden attack of syncope, which may be fatal.

As to the inconveniences and dangers of *ether* given above in the case of *chloroform* they are practically non-existent. Deglutition pneumonia may occur with either, and may he generally guarded against hy a proper previous preparation of the patient.

What then is the best anæsthetic to use?

Undoubtedly the right answer is: If you are not in the habit of frequently administering anæsthetics, use the one with which you are thoroughly acquainted.

If on the other hand, you frequently give or preside over the giving of anæsthetics, learn to give all thoroughly and give the one which you judge to he the hest for your patient.

Remember that it is much more important to your patient that you should give the anæsthetic you know thoroughly than that you should give the anæsthetic which has the reputation of heing the least toxic.

And one may close finally with a golden rule:—*Never under any circumstances give any anæsthetic carelessly.*

J. P. M.

ELECTION OF OFFICERS.

The Nomination Committee overlooked the fact that at the last Conference it was decided to have the next election of officers at the coming Conference, viz., April, 1907. Not at the close of this year.

The result of the papers, so far filled up and sent in, nominate the following:—

President	Dr. McCartney, Dr. Boone, Dr. Park, Dr. Davenport, Dr. Stuart.
Vice-President	Dr. McCartney, Dr. Wilkinson, Dr. Maxwell, Dr. Davenport, Dr. Booth.
Editors	Drs. Jefferys and Lincoln, Jefferys and Booth.
Sec. and Treas.	Dr. Huntley, Dr. Booth, Dr. Cormack, Dr. Logan, Dr. McAll, Dr. Cousland, Dr. Hart.

Members attending Conference will have these, and probably other names, before them from which to make their choice.

We would point out (a) that probahly Dr. Cousland will be resident in Shanghai, devoting his time to our translation work—this is suggestive; (h) that a Britisher now holds the presidency; therefore the next term of office should fall to an American.

Secretary.

Hospital Reports.

The Pennsylvania Medical Work in China.

The field that has been chosen is in South China, in the proviuce of Kuangtung, which is a little larger than twice the size of Pennsylvania, but contains six times the population, somewhat over thirty millions of people, the centre of whose life is at Canton, a city of two million inhabitants. The plau, therefore, is to establish in Canton, first, a dispeusary, then a first-class hospital of three hundred beds, and, coincidently, a *medical school* in which, under the *strongest Christian influences, precisely the highest intellectual and scientific standards* of teaching and research, set by the University of Pennsylvania, shall be maintained. The plan for this school was inaugurated with the sendiug out last year of Dr. J. C. McCracken, '01 Med., by the students of the University, through the Christian Association, to Canton, China, to examine the field. He has since returned, and reports that the greatest need of the Chinese at the present time is for a school where they may gain a first-class education in modern medicine and surgery. A great opportunity is, therefore, presented to begin the establishment of a school that will not only mean much in making world-wide the sympathies of the students of our own University, but it will serve humanity at large in a way and in a place where the need is pitifully great.

The First Prospectus of the Boone Medical School, Wuchang.

The Boone Medical School has been organized, with the co-operation of members of the medical and associated professions in Central China, to meet the growing demand for such an institution, in which the instruction shall be given in the English language.

The three large cities of Wuchang, Hankow and Hanyang with their ten Protestant mission hospitals (men's and women's), their large iron works, arsenal, cotton and other mills, their railroad termini, and their military and educational institutions, form an ideal medical educational centre, offering unequalled advantages for clinical work.

The hospitals in immediate connection with the School are well equipped with the best laboratory appliances.

The School is associated with the educational work of the American Church Mission, and is located in Wuchang.

The first session of the School will commence on Wednesday, March 6th, 1907.

The inaugural lecture will be delivered at 3 p.m., on Tuesday, March 7th.

The medical course covers a period of six years of nine months each. Each year will consist of two sessions. The first session will be from about the 20th of the Chinese first month to the end of June. The second session will begin about the 15th of September and continues to the Chinese New Year.

All students, for the first three years, will reside in the School. During the final years the students may reside at one of the approved hospitals in this centre, but they will still remain under the direction of the faculty.

Thirty-eighth Annual Report of St. Luke's Hospital for Chinese, Shanghai.

On the last day of September, 1906, St. Luke's Hospital completed her fortieth-year of faithful service to the Chinese of the city of Shanghai and to the many strangers who have sought her help from far distant parts of the empire. Her history goes back to the early days of the Settlement, and of those who laid her foundation only one remains to tell thereof. Naturally we have asked our Chaplain, the Venerable Dr. Thomson, to whom she owes her very origin, to tell her story; a matter well within the period of his own remarkable life consecration to the Chinese people.

There are no records to tell the extent of the services of the Hospital in numbers of sick treated and cured, but a fair estimate, from the more recent reports, would indicate that St. Luke's has treated somewhat over half a million sick Chinese and others and, considering the comparatively negative value of the old native practice, we might estimate that she has been the direct means of saving at least fifty to sixty thousand Chinese lives since she was founded. The sum total of pain and suffering relieved is almost unthinkable. Above all, the Hospital has stood, for forty years, a living witness to the sincere and unselfish love and sympathy of the Home Church and of a very long list of Christian people of Shanghai, for the Chinese people among whom we live and work.

The past year, 1905-6, has been the most prosperous in St. Luke's history. She is better equipped than ever before. She has the best operating room in China. Her native staff is the most efficient and most faithful in many years. Her atmosphere is more Christian. Her service is more effectual and farther reaching. And her statistics are larger than ever before.

Medical Wards ...	...	620	
Dispensary ...	...	8,594	
Opium poisoning	...	490	
			9,704
Surgical Wards...	...	584	
Dispensary ...	...	22,137	
Vaccinations ...	...	492	
			23,213
Grand total for the year			32,917

December 18th, the day of the Shanghai riots, was a busy time for St. Luke's, which shared with our sister institution, the Shantung Road Hospital, the care of the wounded Chinese. The X-Rays were an immense help, and the day was spent undoing, as best we could, what others were doing for the protection of the Settlement. In all, seventeen wounded were brought to St. Luke's, three of whom ultimately died. One, who had been shot through the abdomen, died the same night, but another, who was shot through both lungs, recovered. The wounds were, all but one, from bullets, several of which were probably from private fire-arms; and were characterized by the large proportion which passed through bones causing compound fractures, and therefore were long in healing. Two of these healed without suppuration.

The attempt to break jail later in the year brought us four more of the same variety; one compound fracture of the hip being still in the wards. So far as appeared, in none of these cases did the authorities add anything to the terrible punishment already inflicted by the wounds received, and we believe they showed excellent sense in the matter.

Owing to the rise in the price of rice and also of wages, the scale of hospital fees has been raised as follows:—

Wards, formerly 10 cents a day, now 15 cents.

Dispensary, formerly 25 cash a day, uow 50 cash the first visit and 30 cash for subsequent visits.

The private ward is 50 cents a day and the private rooms from one to three dollars a day.

The Hospital is always crowded. Too many patients must be refused to suit our wishes, but until we have more building funds we shall remain so situated. We need $20,000 Mex. to complete funds for our next planned building.

Correspondence.

To the Editor of

"THE CHINA MEDICAL MISSIONARY JOURNAL."

DEAR DOCTOR: I send you herewith my annual report and statistics. Owing to typhoons I did not get home from Japan till a fortnight behind time, and as I have all my colleagues' work to see after, and this region is not peaceful just now, I have been run off my legs since I came back. I think it would be well if the date of the medical meetings could be fixed as soon as possible. I shall certainly read a paper, God willing, but have not fixed on the subject yet. What about accommodation? Are all the Conference delegates just to arrange as best they can, or is there a committee to fix lodgings?

Yours,

J. PRESTON MAXWELL.

ENGCHHUN, October 17th, 1906.

To the Editor of

"THE CHINA MEDICAL MISSIONARY JOURNAL."

DEAR DOCTOR: Just a line to let you know I am returning to China in January, 1907. I have had a busy time since coming home. Deputation work of course claimed a fair proportion of the time, but I am glad to say I managed to put in some time at the London School of Tropical Medicine. I found the course there most helpful, and am glad to say that I passed the class examination, and a few weeks later got the new diploma in tropical medicine and hygiene at Cambridge University. (D. T. M. and H. Cantab), so I have managed to add a few more letters to my name.

If you need any help in the JOURNAL I shall be able to give you some on my return; so please let me know.

With kind regards and best wishes for a Happy 'Xmas,

I am,

Very sincerely yours,

R. T. BOOTH.

131 South Circular Road,
DUBLIN, October 22nd, 1906.

To the Editor of

"THE CHINA MEDICAL MISSIONARY JOURNAL."

DEAR MR. EDITOR: I should like to add my little quota to the extremely interesting and valuable paper by Dr. Logan in the September issue of the JOURNAL. May I first congratulate him on bringing this newly described ascaris egg to the notice of the members of the Association? I have myself for some time been devoting some study to the question of intestinal

helminthiasis and have frequently met with the egg in question. I have noted it in my records as the B. egg, hut as Dr. Logan has hrought forward the subject we may as well for the time adhere to his nomenclature and call it the X egg. To his excellent description there is little to add. Perhaps I should have rather described the egg as very much (not "somewhat") longer than the ordinary egg, at least half as long again in the numerous specimens I have examined, though, as in the case of the ordinary eggs, they vary a good deal in size in different specimens. Otherwise Dr. Logan's description exactly coincides with the eggs commonly seen here. With regard to the worm I have never seen a constricted worm such as Dr. Logan describes, though I have been on the outlook for them since the publicatiou of his paper. Neither am I prepared, without further evidence, to accept Dr. Logan's explanation of the nature of these eggs, seeing that not iufrequently they occur iu great numhers *along with* the normal eggs. To give ouly one example of this I was two days ago examining a most extraordinary stool so crowded with normal eggs—X eggs, ankylostomum eggs, and trichocephalus eggs—that the eggs seemed to compose the greater part of the solid matter of the stool. Now it is most difficult to believe in a case where both eggs were so numerous that the female should meet with any difficulty in acquiring opportunity for impregnation. Still I must weakly confess that though unwilling to accept Dr. Logan's explanation I have yet none which commends itself to me to offer in its place. I will close with a note on the numerical frequency of these eggs as met with here.

I have before me here notes of 187 stools examined duriug the last six months from cases mostly taken as random.

In these 187 cases 134 have shown ascaris eggs.

Of these 134 cases the two eggs have been distrihuted as follows:—

A pure infection of normal eggs in	88 cases
A mixed infection of normal and X eggs in	36 ,,
A pure infection of X in	10 ,,

Or to reduce these figures to percentages:—

Ascaris eggs are present in 71½ per cent. of the stool examined.

X eggs are present in 34 per cent. of the stools examined.

This percentage of eggs is made up of: mixed culture, 27 per cent.; pure culture, 7 per cent.

Trusting that Dr. Logan will shortly be able to give us more exact details of the circumstances under which X eggs are produced.

I remain,
Very faithfully yours,
JAMES L. MAXWELL.

TAINAN, FORMOSA, November 22nd, 1906.

To the Editor of
"THE CHINA MEDICAL MISSIONARY JOURNAL."

DEAR SIR: One copy of the English report sent as you desired. This year already the in-patients have been treated in the new hospital, being under the care of Dr. G. Olpp, of the Diakon, Mr. Baumann and of the newly arrived Dr. G. Eich. This year I had ouly the polyclinic on Tuesdays, Thursdays and Saturdays, and uext year the whole work is to be done at the new hospital; the uudermentioned having henceforth no share iu it. My time has heen and is much taken by the Leper Home. I have great difficulties in finding the money necessary to keep the asylum going. My aim was to awake the somnolent Chinese to do a good work, and I cannot complain; they have responded. From Chinese alone (nothiug has come from the Hongkong and Canton firms) I have nearly $7,000 suhscribed. Please, if you make use of the com-

munication sent, let me have at least five prints of it. I would be glad to pay something for it if needed.

With best wishes for your work,
Yours sincerely,
Dr. JOHN E. KUHNE,
M. B. C. M.

TUNGKUN, 4th Dec., 1906.

To the Editor of
"THE CHINA MEDICAL MISSIONARY JOURNAL."

DEAR DOCTOR: The November number of the MEDICAL JOURNAL is just to hand, and as usual contains food for reflection. Like Dr. McAll, I too am curious to know what happens to the voting paper with candidates' names. For my own part I have *never* signed any such paper, chiefly because the names recorded were unknown to me, and also because I did not quite understand the "li" of the thing.

For the statistical sheet at the back you deserve the hearty thanks of all. I suppose all China missionaries know something of the toil of figures, and the compilation of such a sheet is quite a task in itself.

I notice, however, that many hospitals are not represeuted. To go no further than Manchuria only two out of thirteen hospitals have sent in their statistics to you.

Dr. McAll's letter as to translating standard works is very timely, and I would like to make a plea that they or some of them should be in *Mandarin*. Why should we seal the fountain of knowledge by putting it into Wên-li, even though easy? Think of the many assistants in women's hospitals who may only have been three or four years at school, and perhaps many of them less. Can we not put simple text-books into their hands that they can read and understand for themselves? Dr. McAll's Catechism on Health and Hygiene is an excellent little manual. If published in Mandarin one would like to see it in every hospital, school, and Christian home. Now this is not to go into the Magazine. It is only a little private note to yourself.

With best wishes and the season's greetings,
Yours siucerely,

NORTH CHINA, 3rd December, 1906.

To the Editor of
"THE CHINA MEDICAL MISSIONARY JOURNAL."

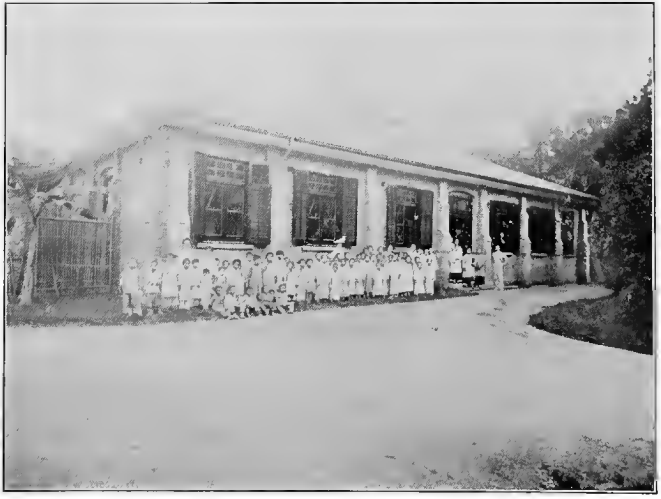
DEAR SIR: With a great deal of the criticism contained in Dr. White's letter in the current issue of the JOURNAL I am in full accord, but there is one point in which I think he has goue a little too far. As to the tying of the "piece of red cord round a limb betweeu the seat of an inflammatory process and the heart" I think it would be better for him to keep his "strong antipathy", for it is certainly the right attitude to adopt. Three times have I had to amputate limbs in which gangrene had supervened, in each case this red cord beiug a contributory if not the chief factor, aud I have many times seen whitlows far from improved by it.

Then while acknowledging that the work of Bier is of value, it is probable that the method has been greatly overrated. I have seen it tried a good many times aud have also used it myself, but have entirely discontinued it. In some cases it causes great discomfort, and I cannot say that I have seen positive benefit accrue in a sufficient number of cases to make one sure that it was this treatment which had caused the improvement.

I am,
Yours faithfully,
J. PRESTON MAXWELL,
M.B., F.R.C.S.

ENGCHHUN, December 13th, 1906.

Patients' Waiting Room in front. Lecture and School Room in rear. Folding Doors between.



ST. JOHN'S DISPENSARY AND GATE SCHOOL, SHANGHAI. C. S. F. LINCOLN, M.D.

The
China Medical Missionary Journal.

VOL. XXI. MARCH, 1907. NO. 2.

Original Communications.

[All papers must be in the hands of the Editors two months before date of publication to insure their appearance in the following number. The editors cannot undertake to return manuscripts which are sent to them. A complimentary edition of a dozen reprints of his article will be furnished each contributor. Any number of reprints may be had at reasonable rates if a *written* order for the same accompany the paper.]

UNUSUAL FORM OF FÆCAL FISTULA.

By Rev. W. ARTHUR TATCHELL, M.R.C.S. (Lon.), L.R.C.P. (Eng.) Wesleyan Mission Hospital, Hankow.

In reading the list of operations in hospital reports in China, one is impressed by the absence of abdominal operations. Perhaps their omissions are explained by the regrettable fact that the hospitals are not sufficiently equipped; therefore doctors refuse to expose patients to the inevitably grave dangers of operation under such unfavourable conditions. Other reasons may be of a personal character, either on the part of the surgeon or local prejudices, etc., etc.

However these or other reasons may justify or explain their absence from the lists of operations; certainly here in China there cannot be any lack of abdominal diseases that constantly call for surgical interference.

It presents a wide and interesting field for those able and willing to undertake such work.

During recent years the technic of abdominal surgery has become so perfected that one ought not to hesitate in entering the hitherto forbidden region of the peritoneum.

It presents the most interesting, encouraging and successful sphere of surgery in the hands of an experienced man, but on the other hand, the most dangerous and fatal if attempted by one who has neither seen or performed abdominal surgery. But this maxim is not confined alone to this particular field of surgery.

During the past two years we have been fortunate in having several very successful abdominal operations, viz., intussusception, removal of the appendix, ovariotomies, etc., etc. The last abdominal case we have had is of unusual interest, and is the subject of this paper.

A man, named Li, age twenty-nine, a native of Kiangsi (?), "after being refused at several hospitals, was recommended by an old patient to try Hankow." He was nearly three weeks being carried on a bamboo bed, turned upside down. His condition can be better imagined by doctors in China than described.

His history, like that of so many other patients, was incomplete and unsatisfactory. When a lad, he had a left inguinal hernia, but there is no evidence now that he had. He denies any other illness until fifteen months since, when his abdomen *rapidly* became distended and *slightly* painful. Does not remember, whether or no, he was constipated. A native doctor supplied medicines, and after three days' treatment the swelling became concentrated to the left iliac region, where an opening appeared on his abdominal wall. Through this, fæces exuded freely. The application of black plasters and taking of more medicine were freely indulged in. He denies absolutely any pain during this experience and was perfectly conscious. No history of intestinal parasites.

Condition on admission.

Very emaciated, anæmic and quite unable to stand. Except for a hæmic bruit at the pulmonary area, his thoracic organs were normal.

On the left side of his abdominal wall, about one and one-half inches above mid Poupart's Ligament and slightly external, was a ragged, irregular fistula, into which one's little finger could be tightly inserted. (Fig. 1).

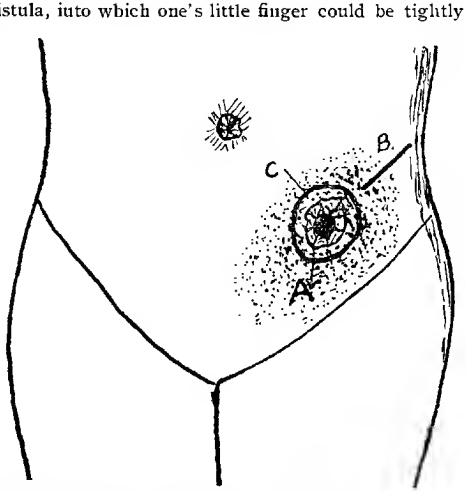


FIG. 1. (A). Showing position of fistula opening on abdominal wall. (B). Incision of first exploratory operation. (C). Incision of final operation.

The area around the opening was deeply and extensively ulcerated, the result of prolonged fæcal and native plaster irritation. Semi-liquid fæcal matter was almost continuously exuding. He also occasionally passed a very small quantity of fæces per rectum.

Several days after his admission we examined him under an anesthetic. By digital examination we found the intestine at site of fistula to be adherent to the abdominal wall. A finger inserted high up into the rectum failed to meet a finger inserted through the fistula. This seemed to exclude sigmoid or desceuding colon. Then a probe could be passed through the fistula in four directions, *i.e.*, downwards, upwards, and in two angular directions backwards. The reason of this can be appreciated by Figs. 4 and 6. Thus far we were not enlightened as to the condition of affairs. We then made a two-inch incision external to the fistula (See Fig. 1. B). By a brief study of the sketches it will be concluded that even this incision and exploration did not help us, but rather precipitated us into deeper mystery.

Knowing that any further interference at this stage would necessitate a long operation, and as he was not in a very fit condition, we decided to wait.

His pleadings for relief from his misery were very pathetic, so a fortnight afterwards we decided to operate.

During this time we paid special attention to the preparation of the septic, ulcerated and eczematous skin around the fistula. (See Fig. 1.) His diet consisted principally of shee fan and milk. For three days prior to his operation we gave three doses of

R. *Calomel* gr. i.
Sodi. Bicarb. gr. ii.
Two hours.

The evening before he was given :—

R. *Mag. Sulph.* dr. iv.
Ac. Sulph. Dit. mx.
Aqua Camph. oz. i.
Stat.

On the morning of the operation (November 10th) a plain warm water enema was given. He had four ounces of warm milk at 6 a.m. At 9.30 a.m. be was placed on a hot water operating table. *Chloroform* was administered.

An incision was made around, and about half an inch distaut from the thickened and puckered area of the fistula. (See Fig. 4, C.) Hæmorrhage was troublesome from the adhesions, but was controlled by pressure. After cutting deeply and freeing the neck (See Fig. 4 D.)

we reached the peritoneal cavity. The intestine was quite free all around, so that we easily withdrew the mass involved and wrapped it in hot sterilized towels.

Except for the adhesions and mesentery, which are not represented, the appearance of the gut was as Figs. 4 and 5.

The only modus operandi was to resect the loop, consisting of about ten inches of intestine.

Makins clamps were applied just beyond A and B Fig. 4 and the intestine divided on the proximate sides. A "V" shaped portion of mesentery was then removed and the arteries clamped.

The unequal ends of intestine were then brought together. The lower portion of the intestine being much atrophied (see Figs. 4 and 5, B), the problem was to securely approximate them. A fine silk suture was passed through all the coats of the intestine, above and below, thus stretching the smaller end of intestine and acting as fixation stitches. (See Fig. 2.) These proved of great service, being held whilst Lembert

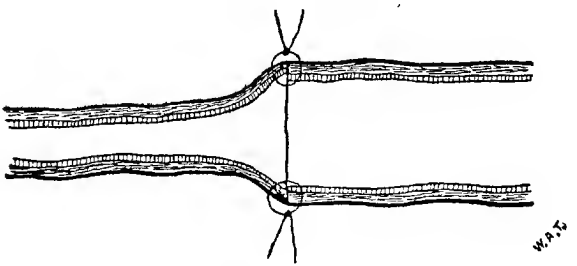


FIG. 2.—Two fixation stitches of fine silk through the two unequal ends of intestine.

sutures of fine silk and about one-tenth of an inch apart were used to complete the union. (See Fig 3).

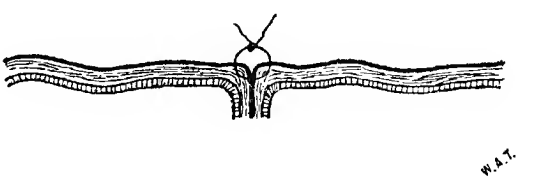


FIG. 3.—Lembert sutures of fine silk.

Looking at the clamped arteries of the mesentery we were somewhat fearful lest they might become gangrenous, so we applied a purse-string ligature to them and sutured the mesentery to the intestine.

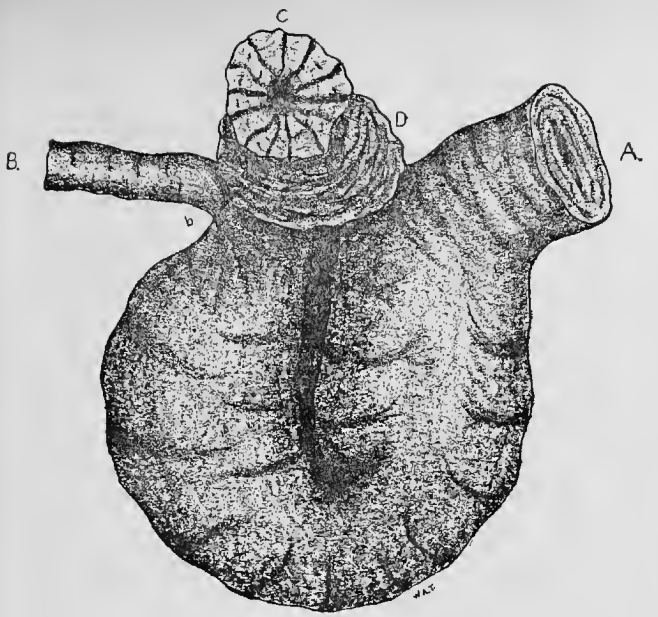


FIG. 4. The outer aspect of the portion of intestine resected. It does not show the mesentery.

A. The upper end where the intestine was normal in size. [constriction b.
B. The lower end, leading to rectum. This was much atrophied, and shows the
C. The opening of the fistula on the abdominal wall.
D. Hard and dense adhesions which formed the neck of the fistula.

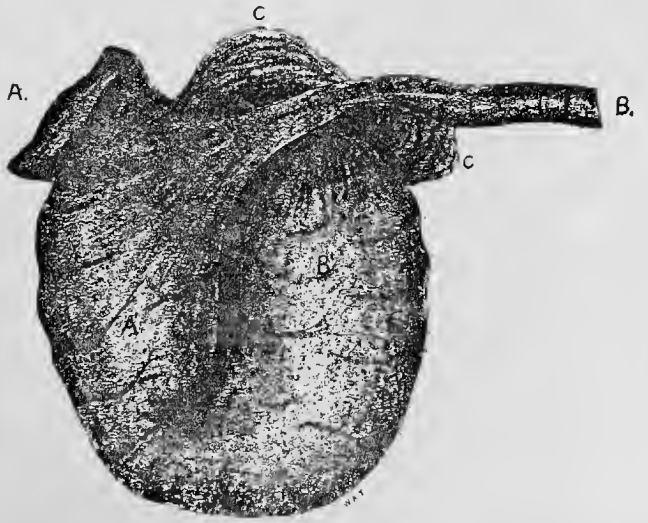


FIG. 5. The inner aspect of the portion of intestine resected.

A. Upper end and normal small intestine. A'. Descending portion of A.
B. Lower end, and much atrophied. B'. Descending portion of B.
C. Inner portion of dense adhesions, surrounding the neck of the fistula.
D. Fibrous tissue around the fistula

One must frankly admit that the intestine was replaced into the abdominal cavity with a degree of anxiety!

The thickened peritoneum around the opening was closed with a continuous silk suture. A thin layer of gauze was inserted under the superficial stitches, which completely closed the opening, in consequence of the skin not being in a good healthy condition.

The operation lasted two hours.

After treatment.

No *strychnine* was given; pulse eighty-six; no vomiting; hot weak tea in small quantities was allowed as frequently as he desired during the first twenty-four hours. He slept peacefully and did not complain of any pain.

The following day he was allowed milk, chicken and weak beef tea, two ounces of either, every two hours.

His pulse has not been above eighty-six per minute. The temperature during the first seven days after the operation was normal, then for ten days slightly sub-normal. He then foolishly had an attack of malaria, which lasted four days.

There has not been the slightest suggestion of tympanites.

Thirty hours after the operation he passed a dark, liquid motion, and continued to pass one for several days; the color becoming lighter each day. On the seventh day I gave:—

R.	*Calomel*	gr. i.
	Sod. Bicarb.	gr. ii.
	Mittee.	iv.

Two hours.

This caused him a little pain on his right side, so gave a low warm enema.

On the tenth day he passed a perfectly formed motion, and has continued to do so since.

Three weeks afterwards he was enjoying fowl, shee fan, etc., etc.

Five weeks after operation he is up, enjoying food, gaining weight and continuing to make an uninterrupted recovery.

The case is of unusual interest for the following reasons:—

(1). Small intestine adherent in that situation. (Fig. 1).

(2). Unusual deflection of the gut.

(3). The fistula bimucosa (? Ed.) and fæcal fistula existing at same time and situation. (Figs. 6 and 7).

(4). The large amount of intestine involved being adherent in its entire extent.

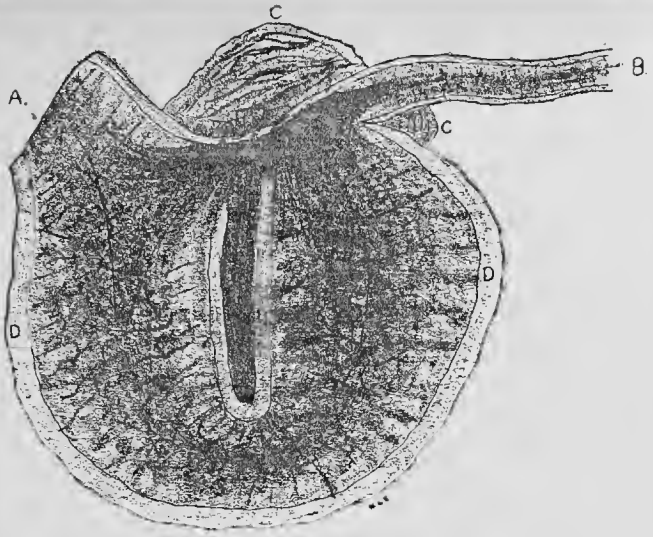


FIG. 6. Internal aspect of resected intestine. The intestine was divided, from B to A and through A¹ and B¹. (Fig. 5.). Showing course of fæces and fistula bimucosa.
A. Upper end. B. Lower end. C. Dense adhesions around neck.
D. Serous and muscular coats greatly hypertrophied.
The darkest shaded portions are the openings into the fistula.
The dark area between the two loops of intestine, is the adhesions, binding together the two portions, and also site of fistula bimucosa.

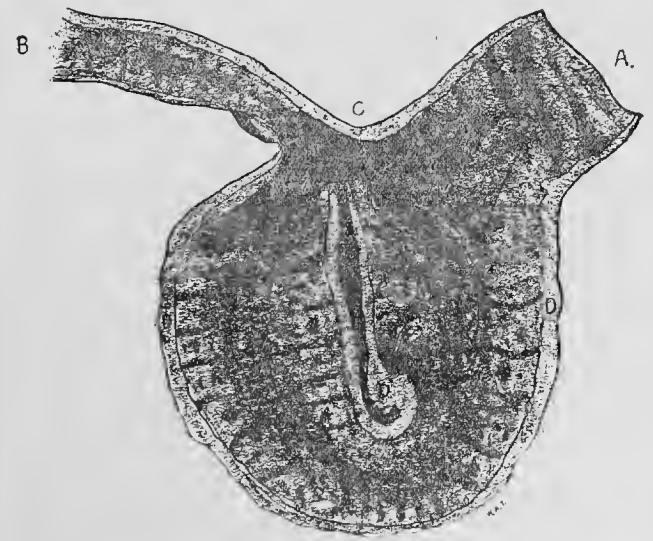


FIG. 7. The counterpart to Fig. 6.
Showing the course of the fæces and fistula bimucosa.

(5). With such a complicated and severe condition that no perforation or peritonitis had resulted. Sufficient plastic material had formed around the affected gut to shut off the peritoneal cavity.

(6). The fæces travelled via two routes. (Figs. 6 and 7).

(7). Coils of gut, forming the loop, were quite free from adhesions to the parietes or to other viscera.

(8). The successful union of the two very unequal ends of the intestine. (Fig 2).

Pathology and theory.

There can be no doubt but that the trouble dated from the days of his hernia. Probably by compression and partial or complete strangulation. Inflammation ensued and the loop of gut became adherent in its entire length. The hernia was reduced and became adherent to the abdominal wall (he does not remember how or when). Either then, or afterwards, I think later, destructive processes were induced in the intestinal walls, either by pressure or an idiopathic ulcer. A fistula bimucosa resulted.

This condition of things remained quiescent and did not cause any trouble or inconvenience until "*something*" happened, *i.e.*, chronic constipation, enteritis, etc., which caused obstruction. The firm adhesions around the neck of the loop failed to yield and so a fæcal fistula resulted.

ODONTOMA.

By C. J. Davenport, Shanghai.

The tooth to which these notes refer was removed by me in July, 1903.

The history of the case was as follows :—

The patient, a student, aged nineteen, was aware of nothing being amiss with his right lower jaw until four months previous to his being seen. The first thing noticed was pain, then great swelling, which increased for a month until discharge took place in the mouth at the side of the tooth. After this the swelling diminished slightly, but the discharge continued until the extraction of the tooth.

On examination a large firm swelling, giving one the sense of periosteal or osteal inflammation was found, situated about the region of the second lower right molar. The swelling was tender to pressure. Internally the natural sulcus in that region was obliterated. Between the swelling and the molar tooth thin pus escaped from a

sinus. The second molar tooth was slightly moveable and lying in the jaw at an angle of about 50°; a little space separating it from the first molar.

The case was diagnosed as a dental abscess with perhaps dead bone at the root of the second molar.

Treatment.—Extraction with no small difficulty of the second molar.

Result.—The specimen depicted below.

Note.—Neither wisdom teeth were cut, nor was any tumour of the tooth apparent before extraction.

Knowing the specimen to be a rare one I sent it to Dr. F. A. Robinson, of Shanghai, who kindly reported on it as follows:—

"By this mail, under registered cover, I am sending back the very interesting specimen you sent down for my inspection. I have never seen anything just like it before; it differs from that of exostosis or radical odontoma, as I find there is enamel, dentine and cementum present, which leads me to believe the deposit is from the ruptured cyst of the third molar. These ruptures are often caused by many diseases of children, such as scarlet fever and other constitutional disturbances which cause inflammatory conditions in and about the jaws, or the rupture may even take place as early as in the fœtus through disease of the mother. It is a well known fact that at the beginning of the growth of the embryo, and continuing through life, there are two forces constantly acting on the teeth the same as on other parts of the body; one of these forces giving size and bulk to the tooth tissue, and this controlled and modified by the other force, which tends to limit the growth and gives form to the tissue and to the tooth; if these two forces be normal, that is, perfectly balanced throughout the development and eruption of the tooth, the result will be a normally developed tooth, but if these forces be interfered with in any way, such as disease, lack of nourishment or undue external pressure, the result may be almost anything such as you have in your specimen. It will be an interesting and rare specimen to send to your hospital museum, and in sending it I would send as much of the history of the boy's life concerning it as possible."

I further forwarded the specimen to Mr. Bland Sutton, who is always interested in tumours and anomalies of this kind.

He has placed the specimen in the College of Surgeons' Museum, London; and further says: "Your interesting odontoma is figured in a new edition of 'Tumours,' which is nearly ready," sending this cutting, which is evidently extracted from this new edition.

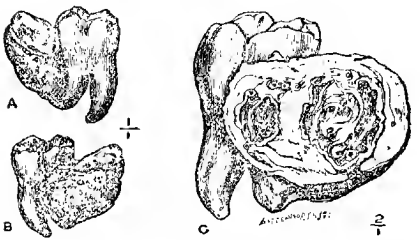


Fig. 137.—Second right mandibular molar of a Chinaman aged 19 years, with a tumour possessing the characters of a composite odontoma.

A. and B. The tooth of natural size.

C. The tooth enlarged and the tumour shown in section.

"The most remarkable radicular odontoma that has come under my notice is depicted in Fig. 137. This tooth was extracted "with no little difficulty" from a Chinese student, aged nineteen, by Mr. Davenport (Hankow); it had caused no trouble until two months before the extraction. There was a swelling around the tooth, supposed to be due to an abscess. On a casual examination the lump on the root of this second lower molar appears as a radicular odontoma, but on section it presents the complex structure of a composite odontoma. The clinical report contains the significant statement that there were no signs of the lower wisdom teeth."

A FEW CASES OF EXCISION OF THE ELBOW.

By David Landsborough, M.B., C.M., English Presbyterian Mission, Shoka, Formosa.

Excision of the elbow joint is an operation which medical missionaries are sometimes called upon to perform. I trust therefore that the account of six cases in which I performed the operation in Formosa may not be without interest to the readers of this Journal.

1. Ankylosis of the elbow in the straight position after unreduced dislocation of the joint.

The patient was a Chinese woman about twenty-six years old. About a year before she came to hospital she had a fall, which dislocated one of her elbows. The injury was treated by the native doctors, with the result that the patient was left with the dislocation unreduced and the joint firmly ankylosed in the straight position. She came to me to see what

could be done, and I recommended excision. The operation was performed by Hütu's method, and early passive movements were employed. The wound healed well. I saw her about six months or more after the operation when she had a useful arm capable of all the uormal movements, but not so strong as the uninjured arm.

2. The second patient was a woman about twenty-five years old. One of her arms had been ankylosed in the straight position for about a year. The ankylosis had followed acute arthritis (puerperal as far as I remember). The elbow was fixed in the extended position and was incapable of supination and pronation as well as of flexion, owing to the superior radio-nlnar joint being involved along with the elbow joint. I excised the joint by Hütu's method. Movements of the arm were diligently kept up as long as the patient was in hospital, hut when I saw her a good many months later, I am sorry to say that bony ankylosis had taken place, though fortunately in the flexed position, so that the arm was mnch more useful after the operation than before.

3. The third patient was also a Chinese woman about forty-five years old. The elbow was ankylosed in the straight position as the result of old arthritis (probably puerperal). The operation performed was excision of the elbow by the usual long posterior incision. The patient left hospital in about a month. She was urged to return after a time and let us see how her arm was doing; but she failed to return and was lost sight of.

4. The fourth patient was a Chinese youth about eighteen years old with old unreduced dislocation of the elbow, the resnlt of a fall. The elhow was firmly ankylosed in the straight position. The excision of the joint was performed by the usual single longitudinal incision. The wound healed well, but the patieut left hospital about a month after the operation and did not return.

5. The fifth case was that of a Chinaman about twenty-five years old with one of his elbows ankylosed in the straight position, the result of arthritis, prohably gonorrhœal. The single posterior incision was used in performing the operation. In this case healing was delayed by sepsis. I saw the patient about three months after the operation when his arm had the normal movements, hut without much strength.

6. The sixth patient was a Chinese child about two or three years old suffering from osteo-myelitis of the upper end of the ulna with formation of a sequestrum. The disease had extended into the elbow joint and destroyed it. The sequestrum was removed and elbow-joint excised by the usual single posterior incision; care being taken to remove as little bone as possible so as to avoid iujury to the epiphyseal cartilage.

I saw the child a few months after the operation when I found a small sinus had formed, due to a little necrosed bone. It got all right after a scraping. A year after the operation I saw the child again; but was disappointed to find partial paralysis of the whole arm, so that the child could not raise its arm above its head. I am afraid that in this case the tourniquet (an Ermark's) had been put on too tightly and so high that even the circumflex nerve was compressed. This accident may have occurred at the second operation. All the nerves of the arm were more or less affected. There was not much wasting of the muscles, however, and there was still some power left in them. I was not without hope that recovery might ultimately take place; but it was an unforeseen and very distressing accident.

Comments.

(a). With regard to the operations employed I have mentioned that I followed Hütu's method in the first two, but in the others I adopted the usual single longitudinal posterior incision. In cases of ankylosis, Hütu's operation is recommended by some surgeons. When the ankylosis is due to old unreduced dislocation, the end of the humerus is dislocated so far forwards that it is rather difficult to get the soft parts pulled off if the posterior incision is used. The ankylosed condition makes this all the more difficult, as the joint cannot be flexed. In performing Hütu's operation in the first case I found great difficulty in getting the ends of the humerus and ulna protruded through the external wound. So the next time I did the same operation I sawed through the lower end of the humerus in the usual position with a narrow-bladed saw passed through from the external wound to the internal wound, carefully protecting the soft parts from injury with retractors. It was easy after that to protrude the ends of the bone through the wound. My saw was inconveniently broad for the purpose however. If I had possessed a fret or a chain saw I would probably have done Hü'tu's operation in the other case of old unreduced dislocation.

(b). With regard to the conditions which made the operation necessary, I would remark in the first place that in none of my cases was the operation done for tubercle, the disease which most frequently calls for it at home. Tubercle of joints appears to be much less common in Formosa than at home, and this seems to be specially so in the case of the elbow.

In all my cases, except one, the elbow was firmly ankylosed in the straight position. In some of them the ankylosis was due to old unreduced dislocations and in others to old arthritis usually gonorrhœal or puerperal. There are few injuries where the native doctor's want of knowledge leads

to more troublesome results than in the case of dislocations. If the Chinese doctor or quack who first treated the injury had only known how to reduce a dislocated elbow, all further trouble would have been avoided. In the cases in which the ankylosis was due to old arthritis (generally puerperal or gonorrhœal) a very much better result could have been obtained if the native doctor had known enough to keep the arm flexed instead of extended during his treatment. In that case the arm would have ankylosed in a position much more convenient for the patient.

In the case of osteomyelitis of the upper end of the ulna involving the joint (case 5) the cartilages had been destroyed and ankylosis was inevitable. The operation was done in order to give the patient a more useful arm. It might have been better, however, as the patient was a child, to have allowed the joint to be ankylosed in the most useful position and to have delayed the excision till the patient was sixteen or seventeen years old. The object in delaying being, of course, to avoid injuring the epiphyseal cartilage.

(c). With regard to the results of the operation, it is unfortunate that some of the patients never returned to hospital after leaving it, so that it is impossible with regard to them to say what was the ultimate result. It would have been more satisfactory too if some of them had been seen at a longer period after the operation.

There is little risk to life in the operation and there were no deaths among my cases. In one case the healing of the wound was delayed by sepsis.

In the first case, about a year after the operation, the patient had a useful arm capable of all the normal movements, but not so strong as its fellow.

In the second case bony ankylosis occurred, but fortunately in the flexed position, so that the arm was more useful after than before the operation.

In the third and fourth cases the patients left hospital with good prospects of useful arms, but they failed to return.

In the fifth case healing was delayed by sepsis, but when I saw the patient, about three months after the operation, he had good prospects of a useful arm.

In the sixth case it was very unfortunate that the too tight application of the tourniquet led to a partial paralysis of all the nerve trunks of the arm; but I am not without hope that the arm would ultimately recover from this condition.

In none of the cases, as far as I know, did a loose flail-like joint result. In one only was there bony ankylosis.

In two cases—the first and the second—there was temporary partial paralysis of the ulnar nerve, due to rough handling during the operation; but as far as I remember, in both cases the nerve ultimately recovered its function completely.

MASSAGE.

By E. D. VANHERBURGH, M.D., Siangtan, Hunan.

The medical dictionary tells us that massage is a method of rubbing, kneading or stroking of the superficial parts of the body by the hand or an instrument for the purpose of modifying nutrition, restoring power of movement, breaking up of adhesions, etc.

A male person performing massage is termed a masseur (pronounced massur), a female person a masseuse (pronounced massuz). It comes from the Greek word massein (*μάσσειν*), to knead.

I presume, in order to be classical, I should begin my subject thus: "As practiced by the ancient Greeks and Romans," etc., but owing to my environment I will simply say: As practiced by the ancient Chinese, massage is an art.

In the south, while on the road over night, I have watched a Chinese masseur performing the operation on a gentleman who couldn't sleep. After I had watched him at it for about half an hour he asked me what I thought of it. I said it was wonderful! at which he quite enthused, and after showing me one of the peculiar twists he gave the muscles of his patient's back, I remarked that it must be hard to learn. "You must teach me." "Oh no," said he, "it would take too long and there are hundreds of movements. You would have to travel with me for years to become expert." So I had to give up learning massage as practiced by the ancient Chinese and shall have to confine myself to the art as practiced by our friends from over the seas.

They say there is probably no instrument which is powerful for good which is not also powerful for evil.

That massage has been a power for good we all know. That it has given quacks the opportunity to fool the people a great deal of the time we also know. And also at times and in various places the word has been misused in a way which has caused many of our profession to give up its use entirely.

Massage, however, honestly employed, is a good thing. It must also be employed intelligently and by some one who is strong and yet gentle.

The performing of massage I believe is not the physician's or surgeon's prerogative (I would like to get the opiuion of others on that), but naturally is one of the duties of the nurse. On the other hand, I believe we should be experts ourselves in order to be able to direct others.

We have all heard of the society of trained masseuses in England, of Battle Creek and the Osteopaths in America, of the Swedish movement cure as instituted by Peter Henrik Ling, of Sweden. Sir William Bennett in the London *Lancet* gives his recollections of the old fashioned "rubbers", as he calls them, as being "very respectable people, rather portly in figure as a rule and strictly honest according to their lights." He says: "One of the essential points for the effective application of massage is that it should only be carried out uuder the orders of a medical practitioner, for attempts at massage by attendants to treat patients on their own initiative can end only in failure."

Pardon a little personal experience. I remember once being treated by a young man who had had two years of training at Battle Creek Sanitarium. I wanted him to massage along the line of the ureter to dislodge and bring down what afterward proved to be a small rough stone about the size of a pea. My pain was inteuse, aud I wanted him to rub deeply from the kidney toward the bladder in the right lumbar and inguinal regions. I wanted him to begin high up and work downward. He insisted on beginning low down and working up. He said it was against all rules to rub downward in that region (said it was all right to rub down on the left side, but not on the right). I told him that my trouble was not in the colon, but in the ureter and that he must have in mind work on the colon and that in my case I wanted him to massage along the line of the ureter. Well, he told me, to rub myself if I knew so much and told me to go back to college and study anatomy. My college room mate came home shortly after and rubbed deeply and downward and helped me. The stone passed on down and was removed a year afterward. Just this much personal experience!

The methods of applying massage are many and differ according to locality and the disposition or methods of the masseur or masseuse. Some of the methods described are vague. The main subdivisions are grouped under four heads, viz., Friction, Percussion, Pressure and Movement.

Deep rubbing or kneading is a combination of pressure and movement without allowing the hand to slip on the skin. It is considered the most useful of all the methods. When this firm, steady, deep kneading is employed there is no trouble from tickling or other disagreeable sensations.

Working from the insertion to the origin of muscles, from the extremities to the trunk, in the direction of the returning currents of blood and lymph. From the stomach toward the rectum following the alimentary canal as far as possible in alimentary troubles.

Where the skin is cold and not well nourished an inunction is used. Cocoanut butter is used always on hands of masseur and on body of patient as well.

Massage at once acts on the skin, fasciæ, muscles, nerves, lymphatics and blood vessels.

You have doubtless read the advertisements of late of the different methods now employed in working away wrinkles from the face, and have learned that no lady or gentleman need loose the beauty and charm of their youth who will send a dollar for instructions? Well, there is something in their methods of massaging the skin of the face to remove wrinkles. It is a good thing, especially for bachelors and old maids. Work with both hands, beginning between the eyes and work outward over the forehead, over the bridge of the nose and downward and outward, using four fingers of each hand. Again from the ears downward and forward until the fingers meet over the mouth and vice versa.

It is wonderful what an effect it has in nervous twitchings and habits of the skin and muscles of the face. Over the eyebrows for twitching of the same.

In administering medicine in some diseases to quicken the effect.

After the use of the hypodermic needle and in many skin diseases.

It increases the tone and size of muscles. Dr. Douglas Graham says that sprains under massage get well in one-third the time ordinarily needed in such cases.

In many nervous diseases it is the only form of treatment which is met with any success at all. Chorea, writer's cramp, neuralgia, and affections of the central nervous system are all benefited by massage.

In the lymphatics and blood vessels it accelerates the flow of lymph and blood.

Dr. Brunten has shown by the insertion of a glass tube that the blood passes three times more rapidly through a part while it is being massaged than when it is not.

We all know of its beneficial effects on the heart. By massaging the peripheries the effect on the heart is almost immediate.

In displacements of the uterus, either forward or backward, the organ can be completely replaced and strengthened. It is also used in difficult menstruation and sluggish uterus.

In enlarged liver it is employed with hot fomentations.

In diseases of the bladder, after nearly filling the bladder with some antiseptic solution, a gentle percussion over the bladder is of great service in any chronic diseased condition of the wall of the bladder which needs stimulation.

In intestinal obstruction the benefits are perhaps more widely known and immediately felt than in any other trouble. By long continued massage the contents of the stomach may be emptied into the intestine. This possibility is very valuable in some cases where an overloading of the stomach has affected the heart.

Also it is highly advocated in certain lung troubles. Especially those arising from congestion, placing the thumbs on the sternum and the rest of both hands under the ribs on either side and squeezing during expiration.

The quieting and sleep producing influence on tired and worn-out patients is very marked. Probably ere this even the idea of it as brought before you may have had some such effect. If not, if you will call in a Chinese masseur and set him to work, telling him of your wakefulness, I assure you he will help you in a few moments.

Percussion over the lungs on the ribs and sternum I will only mention in closing; it being a very ancient habit or custom in the family of man, as any one may find out if they will look in any ancient history under the head of orangoutang or chimpanzee.

A RED LETTER DAY IN THE HISTORY OF GERMAN MEDICAL MISSIONS.

By D. FELDMANN, M.D., Echardtsheim.

At the invitation of the Stuttgarter Verein für Arztliche Mission, the well known and ever active medical mission auxiliary of the Basel Mission, a meeting of about sixty delegates of the German and Swiss Mission Societies and individual friends of medical mission work took place at Frankfurt on November 15th. The object of the conference was to constitute a German Institute for Medical Missions (Deutsche Institut für Arztliche Mission) which is to promote every medical missionary enterprise and mainly the training of students willing to devote their lives to the noble service of the divine Healer as medical missionaries, and to provide opportunities for missionaries of all the German and Swiss societies to acquire a certain amount of medical knowledge and routine. The institute, a combined Livingstone Memorial and Livingstone College as

it were, is to be closely attached to the university of Tübingen in Württemberg, the medical professors of which having expressed their desire to promote the intentions of the institute as much as possible and to enable both missionaries and students to benefit fully by the great and valuable opportunities a highly frequented university like Tübingen affords.

The institute is to find a home on a plot of land situated near the university buildings and the hospital; a friend of the work generously having paid down the whole sum of £1,500 needed for the purchase of the site. The plan is to raise £5,000 before commencing the building of the necessary houses, viz., home for students, lecture hall, laboratory, etc. £2,000 have already been contributed towards the work, and it is to be hoped that this energetic step forward in the activity of German medical mission work will rouse the friends to answer the call for the remaining £3,000. The institute is to serve all mission societies equally, as its president, Mr. Paul Lechler, of Stuttgart, has been unanimously elected. Mr. Lechler is also president of the Stuttgarter Medical Missionary Association.

I am sure our English and American friends will rejoice and combine with us in asking God's blessing and guidance in this new venture, which is to give to men and women the arms of love and mercy wherewith to conquer sin and sorrow.

SPECIAL CORRESPONDENCE.

The British Medical Journal, April 14th, 1906.

PARIS.

TREATMENT OF TUBERCULOSIS BY LIME SALTS.

At a recent meeting of the Société Médicale des Hôpitaux, M. Paul Ferrier made an interesting communciation on the treatment of consumption by recalcification. Having noticed that patients who were cured showed pronounced calcification of the teeth, and other patients with teeth showing decalcification in evolution were rapidly nearing a fatal termination of their illness; considering also that in *post-mortem* examinations cured tubercle was found calcified, and that phosphaturia was found at the onset of the disease and in the predisposed, M. Ferrier was led to calcification as his line of treatment in consumption. Phosphaturia, and decalcification being synonymous, M. Ferrier assumes that an acid or acid salt alone can destroy the enamel and ivory o

the teeth, and dissolve the salts in the bones. Among the agents which may be looked upon as possible causes he enumerated inorganic acids (*hydrochloric*, *phosphòric*, *sulphuric*) or their salts, *acid phosphates* and *sulphates;* or organic acids, taken in fruits (oranges, lemous, etc.) or formed by fermentation in the stomach (*acetic*, *lactic*, *butyric acids*). While it is easy to forbid a patient to put acids into his stomach, it is not so easy to discover the nature of a fermentation in the stomach, but in any case the cause must be looked for when the teeth showed acute caries. In addition to instances in which the drinking water lacked lime salts, the cause might be found in the non-evacuation of the stomach, due to meals not being taken sufficiently far apart (the first meal causing a premature fermentation of the following one), and also in the use of a certain number of substances which paralyse (wine, beer, cider, alcohol, butter, fats, and oils) or which ferment, as do some of these articles, and sugar pastry, and bread itself when made with yeast. Any one of these might cause true phosphaturia, and when their importance was recognized few cases of essential and nervous phosphaturia would remain.

A glass of water taken several hours after a meal left the stomach in in half an hour, aud was therefore an excellent means of emptying the organ before a meal and the best "apéritif;" but to clean a stomach containing an acid residue a base must be employed, and this should be lime not soda. St. Galmier water was the commonest type of such a water, containing a high percentage of calcium bicarbonate to restore the mineral waste of the organism. M. Ferrier in cases of tuberculosis does not give soluble salts, which pass away through the kidneys. The waste will be repaired by utilizing the *hydrochloric acid* of the gastric juice to render soluble aud introduce lime into the organism, instead of giving it prepared and soluble. He forbids acids in any form, directs that the meals shall be taken at sufficient intervals, and regulates the *menu* according to the ideas given above; he gives a glass of water with a strong percentage of *calcium bicarbonate* half an hour before each meal; in addition, prescribes *carbonate* and *tribasic phosphate of lime* (0.40 gr.) and *sodium chloride* (0.35 gr.), to be taken three times daily with or after meals. By this means the food does not stay too long in the stomach, fermentation is stopped, and the digestion is restored in a surprising way, the blood regains its coagulating and plastic properties, and lung lesions of the first and second degree are rapidly and favourably modified. Even cases in the third stage, when the lesion is not very extensive, derive prompt benefit from this *régime*. The rapidity of improvement shows that the treatment answers a real hunger in the

organism; when the stomach is incapable of transforming into chloride a sufficient quantity of lime salts, it is necessary to admiuister this salt all ready to take the place of this deficient function which is too often overlooked. The less advanced cases benefit more than the others from this addition to the treatment. If an aggravation occurs, before putting it down to the vagaries of the tubercle, errors in diet which may have caused a temporary decalcification should be looked for. In hospitals especially oranges play a very pernicious part. Water containing lime sulphate must be avoided. The use of milk also must be watched from the point of view of lactic acid production. Corroboration of the argument is found in the fact that, in all the maritime or other resorts known to give favorable resnlts in tuberculosis, bicarbonate of lime is present in the drinking water.

Dr. Emile Sergent said that during the last eighteen months he has employed this treatment in a large number of cases, and although he began with much scepticism, he had come to apply it in all cases. This method, which did not exclude either the rest or air cures, or the use of *balsams*, especially *creosote*, had the great advantage of avoiding hyperalimentation, which was often badly supported, and did away with the abuse of fats, great factors in acid fermentation. It was simple and easy, and always readily accepted by the patient. Of all treatments, it gave the greatest number of successes. The digestive functions rapidly improved, the appetite returned, the strength increased, and the sweats disappeared.

The majority of cases increased in weight in a surprising way; some as much as four to six pounds in a fortnight, due, he considered, to the restoration of the digestive functions, and the better assimilation than when overfed. The sputum diminished, and the local lesions improved.

Dr. Renon also reported favonrable results in cases treated in hospital. In support of the value of lime, he cited the town of Vernenton, in the Yonne department; since lime kilns had been started, the white dust covered everything and entered the houses, and there had been no tubercle among 200 workmen employed in this dusty occupation, although alcoholism was very common. Moreover, tubercle was less prevalent in the district since the lime kilns were started.

THE CHRISTIAN PHYSICIAN.*

By Dr. HOWARD A. KELLY, of Baltimore, Md.

I am glad to come and say a few words to you, because you represent an unusual and exceptional institution. You represent a little oasis really, in one sense, in the great desert of medical schools, where all ought to be Christians. And the beauty of the school is that you carry out the true ideal of medical work—the improvement of opportunity for Christian service. That is all we are called to be physicians for—nothing else but that we may win friends, and bring our friends where true friendship ought to be brought, to God through Christ. Now, my friends at home get tired of my talking this way sometimes, for I am very insistent about this, and they say they do wish Dr. Kelly would either be a preacher or a doctor, one or the other, so they may know where he stands. I do not want to be a preacher. I just want to be a common, ordinary Christian physician, using such opportunities for ministry as occur in the pursuit of my calling,—the advantages such as a baker, or grocer, or any one else may use in the pursuit of his calling.

Now, I take my position very seriously this evening, as I come some hundreds of miles to address you, summoned by your teachers and friends to stand temporarily as a concrete embodiment of their collective sentiment upon education, which is in many ways momentous. I cannot therefore be content merely to express pleasure and kindly sympathy in fitting phrases, but would gladly use such grace as may be given me to bring you a message which shall strengthen you, and go out as a blessing with each one of you into your chosen field of work. May our Father graciously grant that as we thus enjoy this unusual privilege of Christian fellowship as scribes made disciples unto the kingdom of heaven, we may for our refreshment, like men who are householders, bring forth out of our treasures to-night some things both new and old.

Let us consider together some things touching the opportunities of life, your calling, and in what spirit you go forth. First, let us look briefly at this present time. To you this is a time of transition. Back of you lies the familiar well-trodden path. Before you the way seems hazy and uncertain. You are not quite sure what the next year, perhaps the next few months or weeks, may bring forth. The anxiety

* A stenographic report of an address by Dr. Howard A. Kelly, of Baltimore, at the commencement exercises of the American Medical Missionary College, June 18, 1906. The author gave his address no title, but the one chosen seems fitting both for the address and for the speaker, whose great work in the medical profession, recognized throughout the civilized world, is only equaled by what he has accomplished in various lines of Christian and evangelical activity.

and distress which may be associated with such an uncertainty was just a few days ago vividly depicted before me in my library in the distressed form of one who, unexpectedly cut off from accustomed sources of reveuue, has no immediate prospect of remuuerative employment. What lies ahead?—What failures? What humiliatious?—Who can tell? Iudeed, my friend, who was in a very distressed and pessimistic mood, and might well be, not having any Christian hope that I could discern, wanted to go somewhere where it is exceedingly dangerous to live—to the Philippiues, or Panama; she didn't care if she lost her life. Such people haven't anything better to rely upon.

Now there are two ways of approaching this great question of What next? One is by keenly watching the opportunities as they present themselves, and grasping the right one at the right moment, and so pressing on to success. This is the method of the world briefly formulated of old as "*capere occasionem*," snatching the opportunity. Of these worldly wise ones Christ said, "Your time is always ready." A somewhat similar expression of the world's wisdom is this: "A bird in the hand is worth two in the bush,"—get what you can now out of life, who knows what may come next? It is the world's time which takeu at the flood leads on to victory. But let me remind you that we, as Christians, are not thus guided. Though using all prudence, aud every talent our Father has given us, both in preparing for and conducting life's affairs, we are yet wholly dependent upon him for guidance. We say with glad surrender—

"I know not the way I am going,
But well do I know my Guide.
With a childlike faith I give my hand
To the mighty Friend by my side."

We can act when success seems impossible, and we can withhold from action when all the world about us deems it prudent to go ahead, saying like Christ our Lord, "My time is not yet," when God has not made the way clear. We can then say with David, with eutire abandonment to the will of God, "My times are in thy hand."

WHAT NEXT?

Listen to our Lord's own words as he checks the natural desire to know What next? and note well that which he gives in its place. Note, too, the importance of these words of his, for they are probably his very last. When the disciples asked him, in the first chapter of Acts, "Lord, dost thou at this time restore the kingdom to Israel?"—It is not for you to know times or seasons, which the Father hath set within

his own authority; but ye shall receive power when the Holy Spirit is come upon you, and ye shall be my witnesses." Gracious answer! Mark well its import. We may not have that discernment of times of which the world boasts as its peculiar talent and handmaid to success, but in place of this our Lord confers that which is far, far better, unfailing trust in the Father, who holds all earthly activities not laxly, but well established, fulfilling his will, in his own authority.

In place of a knowledge of times we have, therefore, *power*, promised by Christ, associated with the coming upon us of the Holy Spirit, marking us out, as he first marked Christ out; with the privilege of being his witnesses. O blessed, real, and wonderful service into which you have entered, bearing fruits even unto the life eternal! What a contrast! We cannot pause too long to consider it. On the one hand, knowledge of the present times, limited in its horizon to earth alone, and often mistaken and misleading. On the other hand, power, an indwelling Spirit of God, bearing fruit through us both for time and eternity. I charge you, then, as you journey hence, that you ever keep this crowning—what shall I call it, command, warning, gift, or blessing?—in mind; and that you remember amidst all of life's vicissitudes that He never takes aught away from his child but to give that which is infinitely more valuable in its place. Choose you now, which shall it be,—worldly prudence, or the guidance of the power of the Spirit?

How, then, about the Christian's steps—his way, his path, his walk, his going out, and his coming in? Our Father says of the path of righteousness that it is as the dawning of light, that shineth more and more to the perfect day, while "the way of the wicked is as darkness, they know not at what they stumble." You know that the only way, and the only light on that way, as well as the truth by which we are guided, all center in and are represented by Christ. The very mention of all these synonyms which refer to the Christian's walk on earth is sufficient to recall to your minds the frequency with which they recur in God's Word. Turn to these words in the Bible, and see how they run through the whole like a golden thread, binding all together.

Let me under this caption give you one verse which I often like to dwell upon, found in Ephesians ii. 10. I like to associate it with that other expression referred to in John 7—"Your time is always ready," then in Acts i. 3, the verse I have just quoted, associate that with this in Ephesians ii. 10: "For ye are his workmanship, created in Christ Jesus unto good works, which God hath before prepared that we should walk in them." What comfort, what assurance, what strength do we thus find by simply turning over the pages of God's Word and learning his

mind toward his servants. As for our liberty in the way, we have this promise, "I am the door: hy me if any man cnter in, he shall be saved, and shall go in and go out, and find pasture." We journey iu one mind, for we are iustructed to "let this mind be in you which was also iu Christ Jesus." What blessed realization of the traveler's viaticum of old as we learn that we also have his wisdom and his righteousness, according as it is written in I. Cor. i. 31: "But of him are ye in Christ Jesus who was made unto us wisdom from God, and righteousuess, and sanctification, and redemption."

What further provision is made for the way?—He himself clothes us, too, as he did in type his people Israel as they traveled through the wilderness, when their clothes and their shoes waxed not old, for, does not the Holy Spirit tell us, "Put ye on the Lord Jesus Christ, and make not provision for the flesh to fulfill the lusts thereof?"

The memorial of his death for sinners is our constant food, and we feed, too, on a glorified Christ day by day as his image is being formed in us. As he is all these things for the present time, so is he the goal of out affections, for as Paul has said, "I press toward the goal unto the prize of the high calling of God in Christ Jesus." Well, then, witn all these provisions in view, might Paul cry out, and we with him echo the Spirit's promise, "My God shall supply every need of yours, according to his riches in glory in Christ Jesus." And who can refrain from this tribute, like a voice from heaven heard once more on this dreary earth, "Oh, the depth of the riches both of the wisdom and the knowledge of God! How unsearchable are his judgments and his ways past tracing out."

Men rightly judge those avocations of men for which they are clearly fitted by natural endowmeut, to be of the nature of callings. That is to say, nature herself, in a voice not to be misunderstood, often claims this or that individual for some particular service. Now the sons of men iu this judge rightly, showing that they are fully able to read the signs of the times; aud we, too, may be sure that our Father, in the exercise of that wonderful economy manifested everywhere iu his kingdom, by which he prepares each instrument for the work it is expected to do here, with no uncertain voice also speaks through the tongue of nature. Now while all pursuits ought to be of the nature of callings, there are two which may be said to be callings *par excellence*, uamely the Christian ministry and the ministry to the sick. In the ideal physician, as in his Lord, these two callings are blended. The unusual character of these callings (looking at things as they are, and not as they will be in that blessed age) lies in the personal nature of the call. He who undertakes

a medical ministry (let these words never be divorced) has found in Christ the King of Glory, his own personal Savior; in the Holy Spirit, his teacher and guide; and in God, a father from whom every fatherhood in heaven and earth is named; and in this presence has offered his life's service in compassion, like that of his Lord, to relieve sorrow and suffering, as a tribute to a great compelling love.

THE CALLING OF GOD.

You are called of God, and the very fact that he calls, implies an authoritative sending with a definite message, success in its delivery, and the accompaniment of the sender with the one sent. This appears more clearly in the Greek words, *pempo apostello,* translated "send" and "apostle," than in the English version. All this appears in that splendid passage in II. Cor. v. 17-21: "Wherefore if any man be in Christ, he is a new creature: the old things are passed away; behold, they are become new. But all things are of God, who reconciled us to himself through Christ, and gave unto us the ministry of reconciliation: to wit, that God was in Christ reconciling the world unto himself, not reckoning unto them their trespasses, and having committed unto us the word of reconciliation. We are ambassadors therefore on behalf of Christ, as though God were entreating by us: we beseech you on behalf of Christ, be ye reconciled to God. Him who knew no sin he made to be sin on our behalf; that we might become the righteousness of God in him."

Remember that you are called to go forth, not to do drudgery or to labor as a common servant, but, like Christ, to do the service of sons, rendered in grace, to a loving Father. The Gospel of Mark, as we all know, is the gospel of service. But if you take the world's meaning of service, you will look in vain to find it. It is the service of a son, rendered in grace. This is what Paul feels when he cries out, "For the love of Christ constraineth us."

The great characteristics of sons apart from love—the love which is the true bond with the Father, should be obedience, faithfulness, and patience. Take the Gospel of John and trace through it Christ's obedience to the Father, and then see how he brings his disciples, towards the close, into a like relationship, aud makes their obedience the true test of their love.

I thought it was a great discovery when, several years ago, in Switzerland, I met Mrs. Howard Taylor, and we had a little talk together, and she pointed this out to me—this beautiful characteristic of the Gospel of John; how Christ himself has set that example of obedience, dwelt on it, and instinctively taught it to his disciples, and then

in the end so clearly turns it over to them, that they may be in this world as he was.

Faithfulness is God's great characteristic. "I am Jehovah, I change not." And while we are being proved Christians we are to commit our souls unto God in well-doing, as unto a faithful Creator. We see God's faithfulness in a wonderful way in the realm of nature, in the uniformity of his laws, and I would urge you as Christians, in going out into the world, wherever you go, having this book (the Bible), not to keep your eye, as so many Christians unfortunately do, closed to God's other book. If you go to the other book first, you will misinterpret. You won't find God. Men invariably look to God in the laws of nature. But it is nowhere said that God is law. It maligns God. It is a falsehood to say that God is law. God is found in the beauty, in the grace, in the tenderness, in the gentleness, in the sweetness of nature; not in law. Law is the framework of the house. It is the beams that are hidden away, the foundations that are under the ground. It is the skeleton of the man. If you were to depict a man to one who had uot seen a man before, you would not bring a skeleton out of the closet and say, There is a man. No. Nor would you like in your own house, if you live at home and have a famiiy, or with your father and mother, to have it said that the reign of law there is perfect, but rather that the reign of grace, of love is perfect. Law must be there, but you love God, love beauty, and knowing that it is for the good of all coucerned, your hearts naturally obey. It ought not to be that law characterizes the house, but that grace and beauty characterize it. Take this thought of God's world. Go out and find him wherever you go. I think nothing so serves to turn us to false ways in this direction as this fact. He is there, but we must look to him in the Bible to learn that he is love and life; then we may go out to nature aud find him anew.

And what shall I say of patience, that rare and precious Christian virtue? This is another of God's own characteristics which he has given to his servants, as we read in Romans xv. 4: "Now the God of patience and of comfort grant you to be of the same mind." It characterized Christ, too, as we read iu Rev. i. 9 of "the patieuce of Jesus," and again in II. Thess. iii. 5: "The Lord direct your hearts into the love of God and into the patience of Christ." It is also spoken of distinctively as "the patience of the saints."

Now I would like to dwell somewhat particularly on this word "patience," aud give it to you as your special message this evening; and I do this because, perhaps, it is the lesson I most need myself. I think we always talk with the most honest grace and interest about those

things we see right ahead, that we do, in order to lay hold of them for ourselves. This I clearly see, that no sooner are you rescued by those everlasting Arms which have been put under you to pull you out of the quagmires of sin and iguorance and doubt, and placed upon the Rock, which is Christ, the foundation stone of all our faith and all our enterprises, than there begins that long series of exercises, designed in the economy and by the grace of God to wean you altogether from the world and its ways to him and his ways. Now these exercises, whatever form they take, whether light temptations or severe trials, nagging cares, or grievous burdens which can scarce be borne, trifling ailments, or maladies beyond hope of recovery, are designed to exercise that quality, or rather to give birth to and foster that spiritual quality peculiar to God's people, called patience.

What, then, is patience? The world often associates the notion with lack of complaint, with dejected submission, or simply with waiting a long time. This is not all there is in Christian patience, as we shall see as we take up God's Word to trace this important word in its remarkable associations. Patience is really enduring faith,—faith exercised under adversity and growing stronger. In the Greek where the notes at the end of the page of the English version differ from the American you will see that wherever we have "patience," the word "steadfastness" is placed as the alternative reading, preferred by the English revisers, and the two things together give you the meaning of the word. The Greek word is *upomene*, which is *holding out.* But it is not holding out in a dejected submissiou, crushed down, but it is holding out and looking up gladly to God, knowing that God's will is being wrought, that his purposes are being carried out.

Now you have to go back—let me warn you, always go back to your Bible to find out what words mean when you come across a word that is often used in the Bible; because when a word gets worn it is very much as when you take a coin and use it a long time—the image of the coin, or whatever has been on it, is finally worn off, so you can't tell what kind of a coin it is, or what country it came from. The world takes words and makes them worse. You kuow that. The word "despot" didn't use to he a bad word. The word "tyrant" was not a had word to begin with, nor was the word "villain" bad to begin with. But the world has made them all had. You know very well that the words "by and by" in our old Bible, when it was first translated, meant immediately, right away. But those words do not mean that now. And so with "charity"—how the world has defaced that word in handling it! I am ashamed to use that word now. I never speak of a "charity

patient," never; because as it is used there is a stigma associated with the word. I like to call my free patients "honor patients." So with tbe words "hypocrite" and "ungodly." The Bible speaks of the ungodly man. It does not mean the notorious sinner, but a man without God. So with "unrighteous." So with the word "son" in the Bible. It does not mean some person who, by austerity of living, bas brought himself into some extraordinary kind of religious frenzy. It means that which every one of us has and is in Christ. We are sons by calling, every one of us, which imposes a responsibility to live up to tbat wbich we are before God.

I find patience mentioned only two times in the Gospels (in Luke 8 and 21) where the groundwork of patience and her exemplar were being set forth in Christ's life and character. These two times are significant. In tbe first, patience is connected with tbe apprehension and the holding fast of the Word. Now I would just like to dwell upon that. I want you to get this word "patience" well down into the fibers of your being, because it is the great Christian cbaracteristic whicb you will need to carry you along througb that which is to come in life. Christ is talking of seed sowing, which responsibility is imposed upou every one of us, that we sbould sow the seed, and he tells us, you know, tbat "tbe seed is tbe Word," and tbat tbe good ground in which the seed is sown is in honest and good hearts. Having heard, is that enough?—Hold it fast, and bring forth fruit witb patience. There sbe sits between the two. The word from God, you hold it fast and bring fortb fruit witb patience. Please remember the associations. Then again, you notice tbe significance at the end. He told them that at tbe beginning. He tells them this at the end. Notice the significance. He was telling them of the terrible times that should come,—earthquakes, famines, pestilences, and signs from heaven. "Ye shall be bated of all men for my name's sake. And not a hair of your head sball perisb. In your patience ye sball win your souls." Salvation, then, is to be won by patience.

It is quite cbaracteristic that though patience was abundantly manifested in tbe enduring faith of the Old Testament saints, it is scarcely noted there as such. It was left to the new and clear relationship established in Cbrist to develop this as a great quality.

Now let us try to catch a glimpse of what tbis tbing called patience really is by noting her in some of her associations aud settings in God's Word. First look at Romans v. 3. You know we have three ladders there in Romans. I cannot pause to dwell upon tbem. We will take two of them. "Being, therefore, justified by faitb, we have peace with

God through our Lord Jesus Christ, through whom also we have our access by faith into this grace wherein we stand, and let us rejoice in hope of the glory of God." That is God's way—sweet, simple, short. That is the way of practical experience. We have it given right afterward—the same ladder. Now comes the practical experience. "Not only so, but we also rejoice in tribulations, knowing that tribulation worketh patience, and patience probation (or experience), and experience hope, and hope putteth not to shame, because the love of God is shed abroad in our hearts by the Holy Spirit which is given to us." So you begin with faith. The next step in your life which comes probably a considerable number of weeks after that, control,—patience; patience under control. And may be after awhile, after the repeated exercise of patience, and your being thrown back on God continually, on him, not on man, on him and not on yourself, on that which he gives aud not that which you evolve from yourself or your will power, God will count you one of his experienced ones, one of his proved ones, one of the officers of the guard. Then will that hope shine forth clear. And the Bible means that hope of Christ in heaven to be revealed, manifested here on earth in glory.

That patience is a supreme virtue in the sight of the Spirit while we are here on our earthly pilgrimage is evident from Col. i. 9-11, where these things are predicated—"filled with a knowledge of his will, strengthened with all power, bearing fruit in every good work, increasing in the kuowledge of God." Tremendous proposition for mortals like us—poor, frail humanity! What does it all culminate in?—"Unto all patience and long-suffering with joy."

THE RELATION OF PATIENCE.

Now, patience has a dual relationship, having qualities heavenly and qualities earthly. I would have you for a moment look at some of the associated sisterly qualities with which the omniscient mind of the Spirit has coupled her. Let us turn first to II. Cor. vi. 3-10. What a spectacle you will find there of the Christian life! There she sits at one end of the table with a goodly company of thirty-seven brothers and sisters, while at the other end she sits "possessing all things." Again let us turn to another little group, where she takes a humbler, yet reckoned by Christian experience, a bigher position, iu I. Tim. vi. 11. The lesson there is this: Avoid the consuming passion of money-getting. It ends in sorrow. And how often you and I see that in these days! I don't know whether you see it as often as I do, but I see a great deal more of it at Baltimore in the people who drift in there from all over

this country, who have wealth and nothing else, and how thoroughly one realizes Christ's saying, "How hardly shall they that have riches enter into the Kingdom of God."

Then come and sit down, O man of God, at this table. And who shall our guests be? Here they are in order—Righteousness, Godliness, Faith, Love; all members of heaven's nobility. But will such a distinguished company of the immortals admit any other members on terms of equal fellowship? Yes, for here are two you and I would never have thought of counting among them—Patience and Meekness.

You need not be surprised at this assemblage, for you do not have to look far through the Word to find a wonderful consistency in this exaltation of patience. Look at this little group and catch a note touching the quality of patience. (I. Thess. i. 2, 3). "We give thanks to God always for you all, making mention of you in our prayers. Remembering without ceasing your work in faith, and labor of love and patience of hope in our Lord Jesus Christ, in the sight of God and our Father." And again in Titus ii. 1, 2: "But speak out the things which befit sound doctriuce, that the aged men be temperate, grave, sober-minded, sound in faith, in love, in patience." Patience stands right up in the first rank of the highest Christian experience. And so again in Rev. ii. 19.

Now, if you want to catch her once more in her large family relationship, look at II. Pet. i. 6, and you will find a goodly company, as well as in II. Tim. iii. 10, where in a family of ten she sits with Love on her left and Persecutions on her right hand. We see her last in Rev. xiv. 12, —a large company, on the one hand those who have the mark of the beast on forehead or hand, who have to drink of the cup of the wrath of God, on the other the patience of the saints, they that keep the commandments of God and the faith of Jesus. Surely I do not need now to urge upon you as you go hence the vast importance of patience, mentioned about thirty-two times in the New Testament. Beginning with Luke 8, run through and study it out for yourselves.

Lastly, in what spirit do you go? Here let me charge you most earnestly, for according as you go in this spirit or in that will your work succeed or fail. It matters not how famous you become, or what institutions are reared to do a mighty work under your fosteriug care, or even what great discoveries you may make. You may, as you pursue your calling, with the foundation laid here, lay bare and master the secrets of diseases which have from time immemorial ravaged our race; and yet, if you go not in the right spirit, all will be but dead works. I am thus earnest and emphatic, because in these days there are many spirits abroad. We are living in a day when Bibles are printed and

circulated, and the Bible is talked about as never, perhaps, before in the world's history, and yet days in which God's Word was also never less known. Bibles are turned out by the ton,—given away for nothing, or for a few pennies, and yet when we come to take statistics in our institutions of learning anywhere in our land, we find that the children coming out of our homes know practically nothing about God's Word. We live in days of new *isms*, of teachers professing to honor and professing to draw their inspiration from God's Word, who yet magnify only themselves. We are living in days when new and subtle philosophies are abroad, offering themselves as acceptable substitutes for the true faith. One of these parallels is as much like our faith as a false coin newly minted is like the true gold—hard to distinguish until you get it in your hand and ring it. I talked with a man representing one of these *isms* on the train about three weeks ago, and the parallels between the ism and God's Word were truly marvelous. Extraordinary cunning Satan has developed in these days, and yet absolutely without proof,—a mere philosophy of living, Christ left out, and not a word about the Holy Spirit or His work.

You will distinguish the false from the true if you hold fast this Word of truth, this Sword of the Spirit, which is the Word of God. You will detect the false ring if you note, as your interlocutor glibly praises the new faith, that Christ (though his name may be mentioned) is so completely left out that you are ready to cry, weeping, with Mary, "They have taken away my Lord, and I know not where they have laid him." You will find this above all things, that all these false systems leave out the presence and power of the Holy Spirit, and if they mention his name and his work, narrow him down to some little method of theirs, that he must act through such and such channels, in such and such ways.

Here, my dear friends, is the secret of the weakness of our churches to-day—taught false systems, particularly as these false systems have their strength in our churches, and people have been studying them for a lifetime under Christian ministers. Here is the explanation of all the lamentable ignorance of the things of God in pulpit and in pew. Here, in this lack of knowledge of the work of the Spirit is the cause of the prevailing coldness. This explains why missions languish, and the heathen in the Sudan, and in India and in China, when they cry for bread receive a stone. Be very clear about this, and know that even as when our Lord was on earth, it may be said to-day of people at large, sad though the words are—let me repeat these words of John the Baptist, "In the midst of you standeth One whom ye know not,"—a person

definite and real, as real as our Lord himself, though unseen, a comforter, a guide, a teacher, the power of the church, the great Life-Giver. See what our Lord says of him in John's Gospel. Only run through it yourself. Chapters 1, 3, 7 and 14-16. And then see how like a flood he comes in, according to our Lord's promise in the Acts,—spoken of some fifty odd times, about as many times in the one book alone as in all the Gospels. Recognize him and his work, and he will be in you the power of Christ, living again on earth, and working his will through you.

I charge you, therefore, that your go forth to your work in Christian patience, and in the power of the Spirit of God.

THE GATE SCHOOL AND DISPENSARY AT ST. JOHN'S COLLEGE, SHANGHAI.

Just within the gates leading to the College, stands the plain substantial little building shown in the pictures. This building is the result of gifts from friends in America and in China, which were given in response to a special appeal.

A well equipped dispensary, consulting rooms and a commodious waiting room make daily medical work possible, and many of the poor country people gladly avail themselves of this opportunity to obtain relief from their sufferings. Dr. Lincoln, the physician in charge, and his faithful native assistant, Mr. Tseu, fully appreciate the comfort and convenience it is to have a place like this after the years of work in the former cramped and inadequate quarters.

On Sundays the western end of the building provides a large well-ventilated cheery school-room. Bright pictures adorn the walls, hymn sheets hang on a frame in the middle of the platform and the benches are filled with a varied company. Girls who work in the silk filature near by, and for the most part poor ignorant little creatures, boys from the village school which is supported by the College Y. M. C. A., amahs employed in the mission compound and some few country people,—form a group of very different mental calibre, but all of them can be interested in the simple address or Bible story.

Class instruction is also a part of the usual routine; the scholars, big and little, being graded according to their attainments.

The building was opened in April of last year, and the work carried on in it forms a connecting link between the educational centre and the many ignorant country folk around.

E. G. C.

The China Medical Missionary Journal.

VOL. XXI. MARCH, 1907. No. 2.

Editorial.

WELCOME!

Before the next issue of the JOURNAL appears, we shall have met together in the flesh once more. We suppose these meetings mean more to us all than do the gatherings of any other medical body in the world, coming together as we do so infrequently and from posts so isolated, and yet, perhaps as no other body of medical men, so one in purpose and aspiration. It is worth the effort to each of us to make one more in Shanghai at this time. Let no one be easily persuaded that he can afford to stay away. Do not let that dread parasite of conscience, the vermis inertiae, distort our inward vision so that we will suppose that we can do more for the Chinese by "remaining at our posts" during those two or three short weeks, which if spent in Shanghai will help us to do our whole work better for three years to come. If any imagine, for an instant, that he is indispensable, even in his special mud-puddle, remember the cheering thought that the world might lose all of us some day, and yet would get along somehow, and pretty well, too. Come to Shanghai if you can get out of bed. Come prepared to give the best you have and take the best that all the rest have to give. That is a fair exchange and yet based on a certainty that each will receive manyfold as much as he is able to give.

A FEW SUGGESTIONS.

The main object of such a conference as that which we are about to hold is one of mutual instruction and the programme is drawn with that in view. Each one who contributes a paper gives to the rest the fruit of some careful study and some special experience. Each one who intelligently comments thereon, broadens the outlook and generalizes the experience. But alongside

of this work, each conference that we hold should make some records along the score of social progress and even the comparatively unimportant conditions of our organization should be reviewed in order that our future work may be done as expeditiously as possible.

With these ends in view we would beg that each member intending to be present should review in his own mind such matters as he has found lacking in our methods and organization, such matters as he has or has not heretofore found time to criticize either by letter to the Editor or by other means, and which have not, in his opinion, as yet been rectified. Make note of each such item and from such notes make our business meetings replete with progress to the exclusion of red-tape. Such questions as the best form of annual statistics, the best form for the election of new members and especially questions in which the Association should be interested in its relation to the progress of professional matters in China.

We have in mind ourselves two or three points which we shall present for consideration and which may serve as suggestive of others which will prove of equal interest or importance.

Inasmuch as the museum of the Association has never become a matter of general interest and inasmuch as it consists at present of less than twenty-five specimens of which only four or five have labels, we shall advise that either the office of Curator be abolished or some steps be taken for the regeneration of the museum-scheme and that some guarantee be requested looking to the regular and systematic addition of specimens.

Whether the office of Curator be abolished or not, we would strongly urge the creation and appointment of a Corresponding Secretary, in order that some regular communication may be established with any and every member who wishes to reach the attention of the body and who does not care to do so in such formal manner as a regular paper in the JOURNAL requires. The Corresponding Secretary should be expected to present regular bunches of interesting correspondence in the issues of the JOURNAL, and it should be his particular duty to get the newly elected members into touch with the Association. The Editors would not for an instant relinquish the pleasure of their own personal correspondence with contributing members as well as with their many valued friends whose friendship is the outcome of this same correspondence, but

they are all too conscious of their delay or failure in supplying such proper and necessary information as is constantly sought from them, as for the supply of hospital plans, specifications, etc., which only the press of work would keep them from giving most gladly and to the very best of their ability. A Corresponding Secretary could do this work better and more promptly.

Finally, and briefly, we desire to see the Association appoint a good committee and take up seriously the "Patent Medicine in China" question. It is beginning to burn and demands our attention more acutely than opium.

A CORRECTION.

Among several typographical errors in Dr. Kuhne's statement of income in our last issue, two deserve our formal correction. On page 15 at the bottom, "Interest" should read $6.58 not $6.30, and the total of that column should read $16,963.31 not $16,863.31.

A COMPLETE FILE AT LAST.

Through the generosity of St. Luke's Hospital, Shanghai, and through the efforts of the Presbyterian Press and the Editors, we have the pleasure of announcing that the Editors' file of the JOURNAL, which is of course the property of the whole Association, has been at last completed. The matter has been much on our conscience, that the Association should not own a complete copy of its own JOURNAL and yet for a while it seemed a hopeless task to remedy the matter. The editors of recent times have been careful to see that a bound copy was regularly added at the end of each year to the file, but the first six years were entirely lacking, and four later issues lacking and out of print. The whole first six years, from 'eighty-seven to 'ninety-two have been presented to the Society by St. Luke's Hospital, which recognized the larger need of the Association as taking moral precedence over its own pleasure in owning so rare a possession. The four out-of-priut issues were supplied from the private library of the Editor, and the Press was able to supply certain others from its book-room. The twenty complete volumes, without a missing page, are now bound and in the keeping of the Editors,

who will hold them as a sacred trust for the Association. They will be on exhibition at the coming conference and we trust will prove of general interest, especially to younger members.

OUR CONFERENCE.

We would again remind members of our Association that the Conference comes next month on April 19, 20, 22, 23.

It is to be held in the upper hall, Union Church buildings.

It rests with you whether it is a success or not. *Some* have never even replied to our request to them to read a paper.

No one has sent Dr. Butchart any interesting plates or photos for his proposed lantern exhibition. Such lethargy is typical of the kingdom in which we work, but surely ought not to be found amongst our own ranks. Members are urged to use this opportunity.

(1). By bringing forward any matters for the betterment of the Association.

(2). By sending in papers on pressing or helpful subjects.

(3). By electing the officers they want for the next three years. Nominations are before you (see p. 40, January JOURNAL) and the ballot has to be cast next month.

TENTATIVE PROGRAM.

Friday, 19th April.

9.30-10.00 a.m.	Devotional.
10.00 a.m.	Election of Secretary, etc. President's address.
11.00 a.m.	Election of officers for 1907-8-9. Reports of Committees.
2.00 p.m.	Reports. (Continued).
3.00 p.m.	Dr. Maxwell's paper. *Subject*, Is the Association fulfilling its object? Discussion.

Saturday, 20th April.

9.30-10.00 a.m.	Devotional. Reading of Minutes.
10.00 a.m.	Dr. Hart's paper on Asepsis and Antiseptics. Discussion.
10.45 a.m.	Dr. Plummer's paper on Necrosis. Discussion.
11.15-11.30 a.m.	Open talk on new instruments or new apparatus.
11.30-12.00 a.m.	Dr. Woodward's paper on Hospital Construction.

2.00 p.m. Dr. Hodge's paper on Syphilis as found in China. Discussion.
2.45 p.m.
3.30 p.m. Unfinished business.

Monday, 22nd April.

9.30 a.m. Devotional. Minutes.
10.00 a.m. Fevers of China. Discussion.
11.00-11.15 a.m. Open talk on new drugs and new treatments.
11.15 a.m. Dr. Wilson's paper on Native Medicines. Discussion.
12.00 noon. Dr. Boone's paper on Cyclic Vomiting. Discussion.
2.00 p.m. Dr. Jefferys' paper on Distribution of Disease in China. Discussion.
2.45 p.m. Dr. Logan's paper on Use of Microscope in our work. Discussion.
3.25 p.m. Dr. Otte's paper on Effect of Opium on Malaria. Discussion and unfinished business.
8.30 p.m. Photo lantern soirée.

Tuesday, 23rd April.

9.30 a.m. Devotional meeting. Minutes.
10.00 a.m. Dr. Beebe's paper on the Missionary Side of our Work.
10.45 a.m. Paper on Gynæcological subject. Discussion.
11.30 a.m. Paper on Skin.
2.00 p.m. Paper on Eyes.
3.00 p.m. Paper on Sanitation in Chinese Cities. Discussion and unfinished business.
8.00-10.00 p.m. Reception by Dr. and Mrs. Boone at 4 Minghong Road.

[Signed Editorial.]

CHINA AND THE OPIUM TRAFFIC.

The next meeting of the China Medical Missionary Association is to take place at a critical period in the history of the Chinese empire. During the last few years opium has barred the way to any great reform—moral, political or commercial—but now, at length,

the government has begun to move in the matter of the suppression of the traffic.

The Medical Missionary Association holds a unique position in China, as being the *only* corporate body of scientific men and women who, both from their personal knowledge of the people and scientific acquaintance with the subject, are in a position to give an expert opinion on the question.

It therefore behoves us to make all the use we can of the position in which we stand to help the government in their most praiseworthy effort. We would therefore urge that at the coming meeting of the Association a very strong committee be appointed to draw up a series of resolutions to be submitted to the meeting; such resolutions to be placed in the hands of the leading members of the government and in those of the viceroys who have shown so earnest a desire to rid their country of this scourge. We think that our opinion should be recorded at least on the following points :—

1. The harmfulness of the habit, both physical, mental and moral.

2. The little comparative danger there is to the life of the individual in the immediate cessation of the drug, compared with that involved in the continuance of the habit.

3. The necessity of absolute prohibition within a given time, and in the meantime the avoidance of all attempts to gather an increasing revenue from the habit.

4. The impracticability of licensing smokers, as exemplified in the experience of Japan in Formosa.

There will probably be other points which should be dealt with, but we believe that attention at least should be paid to these.

It cannot be too strongly pointed out that a wrong step at the commencement may prove almost irretrievable afterwards. In this connection we have the very unfortunate example of Formosa, where after more than ten years of Japanese rule and undoubtedly an honest desire in the original institutors of the opium regulations to suppress the habit, there is still little, if any, reduction in the number of habitués of the drug.

JAMES L. MAXWELL.

FROM THE PUBLICATION COMMITTEE.

TSINAN, *January 17th, 1907.*

EDITORS "CHINA MEDICAL MISSIONARY JOURNAL":

DEAR SIRS: I am sorry to have delayed so long in sending you an answer to Dr. McAll's courteous criticism in the November number of the JOURNAL of the work of the Publication Committee. It is a pleasure to have the work of the committee noticed even in the way of criticism, for it shows that some are taking an interest in the matter and are keeping a watch on what the committee is doing to justify its existence.

1st. Let me call Dr. McAll's attention to the fact that the so-called resolution, to which he refers in his letter as being found on page 104 of Vol. XIX of the JOURNAL, is part of a paper prepared by his colleague, Dr. Gillison, and read before the Medical Conference in February, 1905. This was never made part of the official acts of the Conference, but simply came as a suggestion of what the writer thought was a desirable course to take. The official action of the Conference, which resulted in the appointment of the Publication Committee, and under which that committee is now acting, is found on pages 43 and 44 of Vol. XIX; the report of the committee which was appointed to take the matter into consideration being finally adopted as follows:—

(1). We recommend to the Association that it undertakes the publication of a standard series of text-books in Chinese, and when practicable a Chinese medical journal.

(2). That a Publication Committee be appointed, composed of the following members: (Here follow the names of the Committee).

(3). That of the surplus funds of the Association now in hand and at the end of each year, four-fifths be at the disposal of the committee, which shall also be empowered to raise funds by voluntary subscription for its work; such funds to be paid into the treasury of the Association.

No instructions further than the above have ever been given to the committee that I am aware of. We quite agree, however, with Dr. McAll that the method which he favors would be an excellent one if it were possible to put it in practice, namely for the committee to go over carefully the whole field of medical text-books published in America and England and select the best of the lot, and then appoint men to translate these selected books. But unfortunately the work of this committee is wholly voluntary, and has to be done in the intervals of other work. No member of the committee can devote one quarter of his time to the work connected with this publication business, nor has the committee any power to compel men to do work which it thinks desirable to have done, nor has it funds to pay the expenses of meeting from time to time to consult about what is best to do.

Under the circumstances the only feasible thing seemed to be to accept for publication any books which were offered, and which were approved by the Executive and Editorial Sub-Committee, and to see what could be done with existing books in the way of revision and republication. It was deemed an eminently wise thing to approach the Canton Medical Missionary Society in regard to being allowed to revise and reissue some of their books—in fact we first thought of buying them out entirely, but failed to come to terms—for, as everyone knows, the books issued in Canton have a sale all over the empire, and while some

are not at all what we would desire to introduce into a standard series, others, such as Practice, are excellent books and have served a most useful purpose in training medical students during the past twenty years or more. So if these more useful ones can be revised and brought down to date, and thus preserve the old and yet introduce what is necessary to make them fit for present-day use, would it not seem a wise thing to do? The Canton people have agreed to allow us to select any of their books we wish to, and after revising them publish them under our imprimatur, with the understanding that they receive fifty per cent. of the net profits. So far only Dr. Kerr's Practice has been selected for such revision.

2nd. Dr. Cousland's translation of Osler, while originally suggested by himself, met the hearty approval of the committee, as there never has been a question that Osler is an excellent book, the best apparently that the members of the committee were acquainted with. No doubt others might have individual preferences, just as Dr. McAll has for Taylor, and if we could get together and compare notes, possibly we might select a better book than Osler, but it is rather disconcerting to find the committee blamed for selecting such a standard book as the one agreed upon.

3rd. No decision whatever has been made as to a general surgery, so that the field is open for suggestions. There is, however, no thought whatever of trying to revise Kerr's Surgery, one of the poorest of the Canton series. The only book which the committee has on its list in this line is Dr. Main's translation of Caird and Cathcart's Surgical Handbook, and even this has not been finally passed upon, as Dr. Main has been too busy to get it into shape to show the committee for criticism.

4th. Finally I may say in closing that the following are the only books so far that the committee has finally accepted and that are either already published or in press:—

1. Cousland's Physiology, a translation of Haliburton's.
2. Ingram's Therapeutics, a translation of Hare and Wood.
3. Fulton's Diseases of Women, a translation of Penrose.
4. Niles' Obstetrics, a translation of Evans, etc.
5. Neal's Diseases of the Eye.
6. " " " " Skin.
7. Niles' Revision of Kerr's Practice.

Venable's Bacteriology and Cousland's translation of Osler have been agreed to by the committee, but are not yet in press, nor will they be until after the next meeting of the Association. The Manual of Nursing, translated in Hankow, has been presented to the Association, but was never passed upon by its committee.

There will be an opportunity for the Association to discuss at its coming meeting in April the work of its Publication Committee, and we trust a full and free discussion will take place, and that the committee may be greatly helped by practical suggestions as to what the Association thinks it wise to attempt in the way of getting out a standard series of medical text-books in Chinese.

Truly yours,

JAMES B. NEAL,

Chairman, Publication Committee.

PRESBYTERIAN MISSION PRESS,
18 PEKING ROAD,

SHANGHAI, *6th February, 1907.*

DEAR DR. DAVENPORT:—

Herewith accounts as promised. Trust they will be found correct and in order.

Yours truly,

JAS. WILLIAMSON.

MEDICAL JOURNAL.

		$ Cts.	$ Cts.
June 30.	By account rendered	333.47	
	,, subscriptions collected 6 months to date, $404.63. Less 10%, 40.46	364.17	
	,, advertisements collected 6 months to date, $53.00. Less 10%, 5 30	47.70	
	,, sales 6 months to date, $1.80. Less 10%, 0.18 ...	1.62	
			746.76
	LESS DEBIT.		
July 11.	To pictures from G. Olpp (Hongkong $20.00)	19.88	
Aug. 20.	,, 17 blocks for printing coloured pictures in September issue	34.38	
Sept. 11.	,, 1,500 wrappers for JOURNAL	8.90	
Oct. 5.	,, binding 2 copies July JOURNAL (Dr. Jefferys) ...	1.00	
,, 25.	,, 90 mailing list	10.20	
July 5.	,, 350 copies and 6 photo blocks, July	111.83	
Sept. 4.	,, ,, photo blocks, etc., September	130.91	
Nov. 1.	,, ,, ,, November	127.49	
Dec. 31.	,, binding 3 JOURNALS, 1904-5-6 (Dr. Jefferys) ...	2.25	
	,, stamps and postage 6 months to date	43.83	
			490.67
			$256.09

PUB. COMMITTEE, M. M. A.

		$ Cts.	$ Cts.
June 30.	By account rendered	2,213.61	
Aug. 11.	,, cash on account	65.59	
Dec. 31.	,, sales 6 months to date, $468.34. Less 10%, 46.83 ...	421.51	
			2,700.71
	LESS DEBIT.		
Aug. 21.	To J. H. Ingram, composition, etc., on 70 Therapeutics	13.00	
Oct. 31.	,, Dr. J. B. Neal's order 4222	14.23	
Sept. 29.	,, 500 Dr. Cousland's Physiology. 2 Vols. Second Edition	276.02	
Dec. 31.	,, 1,000 copies Dr. Neal's Diseases of the Eye... ...	391.61	
	,, 21 blocks from U. S. A. for above	52.87	
	,, coloured pictures from Japan	134.34	
	,, duty, etc., ,, ,, ...	6.38	
Oct. 26.	,, binding 50 copies (half leather) Physiology ...	25.00	
Dec. 31.	,, electrotyping of 181 blocks. Dr. Cousland's Physiology...	70.59	
	,, wooden mounts for above	18.00	
	,, books returned. L. J. Davies	1.30	
	,, 10% discount allowed to Canton Medical College ...	10.00	
	,, 400 statistical blank forms	3.29	
	,, postage, envelopes and addressing	6.00	
July 6.	,, 400 Medical Nomenclature	93.70	
			1,116.33
			$1,584.38

Medical and Surgical Progress.

Progress in Internal Medicine.

Under the charge of EDWARD H. HUME, M.D.

THERAPEUTICS.

Among the bold and striking uses of well-known therapeutic agents reported of late, prominence must be given to the three following:—

Salicylate in Rheumatism.

T. W. Clarke (*American Journal of the Medical Sciences*, September, 1906) reports that at the Lakeside Hospital, Cleveland, Ohio, U. S. A., the dosage of the *salicylates* has risen from the conventional ten or fifteen grains every two to four hours to ten, fifteen and even twenty grains every hour, in order to get the effect of the drug as early as possible. He reports seventy-four cases; those cases being excluded from the study which showed any complication (acute) on entrance. The results are discussed under the heads of therapeutic and diagnostic effect.

Therapeutic Effect.—Ten to fifteen or twenty grains were given every hour while the patients were awake; the attendants being trained to recognize the appearance of deafness and tinnitus as an index of full drug effect. After a temporary stoppage of the drug awaiting the subsidence of these symptoms, it was again resumed in doses as large as before; the interval being slightly longer. "The amount of *salicylate* required to produce symptoms of its full effect has varied from seventy-five to 360 grains; the average in the entire series being 200 grains. These massive doses are borne well, as a rule, without nausea, vomiting or depression, and the coincident relief of pain makes what discomforts there are seem trivial. The effect of this sudden saturation with the drug is a very rapid fall of the temperature to the normal." A composite chart of the temperatures of seventy-four patients during the first three days of their stay in hospital shows the temperature to have reached normal in about thirty-six hours after admission. The shortest continuance of fever was one day and the longest was eleven days. More striking still, perhaps, is the relief from pain. "A patient brought in during the afternoon in such acute agony that a touch of the bedclothes or a jar of the bed causes a cry of anguish, and who may have required a dose of *morphin* to allow the nurse to remove his clothing, frequently greets the physician with a smile the following morning at the ward visit, and often moves his joints himself to show his improvement. Analysis of seventy-four cases shows that by the fourth day the average patient is free of discomfort. The longest period has been nine days." Swelling also disappears rapidly, and in only four of the seventy-four patients did any joint become involved after the treatment had begun.

"Owing to the general belief in the danger to the heart of using the *salicylate* in large doses this organ has been watched with especial care. Cardiac complications instead of being increased in frequency by this method of treatment, seem to be lessened." Figures given by various writers show that heart complications occur in from twenty to forty per cent. of the cases. In the present series of seventy-four

cases, forty-six apparently had normal hearts on entrance and only six of these developed any sign of endocardial complication. In two of the six cases the murmur disappeared before the patients left the hospital. This is equivalent to a percentage of only thirteen. In the seventy-four cases there was only one with pericarditis.

"In most of our cases, the *alkalies* in the form of *potassium citrate* and *acetate* were given. In eighteen of the cases, however, it was omitted and dependence was put upon the *salicylate* alone. It is of sufficient interest to note in passing that all the six cases of cardiac complications occurred in the patients who received *alkalies*, and none in the fourteen patients with normal hearts on admission who were on the *salicylate* alone." No depression of the heart was noted in connection with the *salicylate* treatment. With proper care and attention the element of danger in using such massive doses is not great. However, as some persons show no toxic symptoms till they have taken enormous quantities, it would be well to put a limit upon the amount to be given. One case in the series of seventy-four took 580 grains at the rate of twenty grains an hour. The drug was then discontinued, and for two days he did well; at this point becoming wildly delirious, and dying with symptoms of meningitis. His death was not supposed to have had any relation to the large amount of *sodium salicylate* taken.

The main objection to the use of such massive doses was found to be that after the first three days it was difficult to keep the patients in bed, as they felt so comfortable.

Diagnosis.—Keeping in mind the fact that greater care is being constantly given to the differentiation of acute articular rheumatism from the acute stage of arthritis deformans; it became definite conviction that large doses of *salicylates* served as a diagnostic test. The true rheumatic can tolerate much larger doses than can persons suffering, for example, from gonococcic arthritis. Further, in true rheumatism the fever, pain and swelling are gone in two or three days, while in other forms of arthritis, as soon as the toxic effects of the *salicylate* are worn off, the pain returns with all its old vigor.

Formaldehyde in Coryza.

Lacroix (in the *Concours Medical*, abstracted in *The Practitioner*, July, 1906) prescribes 1½ drams of *formaldehyde* in a wide-mouthed bottle. "The patient holds the open bottle immediately below each nostril as if about to use a smelling-bottle and inspires gently. There is produced in the nasal fossæ, and generally also in the forehead, cheeks and nape of the neck, showing the penetration of the formic vapors to the frontal, maxillary and sphenoid sinuses a sense of smarting and tingling, intense enough to cause a slight lacrimation and a running of mucus from the nose. As soon as this sensation becomes painful, the inhaling is stopped for a few minutes and then renewed for two or three times more. This is done every hour, or less often, according to the degree of severity of the coryza." One or two drams are said to be enough to treat colds in the head for several years. The *formaldehyde* is quite innocuous and very convenient to carry about

Adrenal Extract in Neuralgia and Neuritis.

Carleton (*American Medicine*, February 24th, 1906, quoted in *The Practitioner*, November, 1906) gives an interesting series of cases treated with supra-renal extract. The first case was that of an actress

who had suffered twice a month for years with attacks, during which the whole course of the left iufra-orbital nerve was red and œdematous with shooting pains in the supra-orbital maxillary and temporo-facial nerves. Fifteen drops of *adrenalin* were applied along the course of the infra-orbital. Pain ceased in three minutes and throbbing in four. Three months later it was reported that there had been only slight returns of pain. In another case, there was neuritis of the terminal nerves in the palms and soles. Each spot of pain was touched with a drop of *adrenalin* solution, 1-2000, and in five minutes the pain was all gone. Similarly in a case of sciatica of great severity *adrenalin* ointment was applied along the course of the nerve, causing disappearance of the pain inside of six minutes. There was no possibility of hypnotic suggestion being a causative factor in the cures. In one case, test applications of *vaseline* were made without the knowledge of the patient, with the result that relief only came when the true *adrenalin* ointment was used.

DIRECT TRANSFUSION OF BLOOD IN HEMORRHAGE.

In addition to the above cases, in which use was made of well-known remedial agents, an epoch-making report comes to hand concerning the treatment of hemorrhage by a new method. George Crile, of Cleveland, Ohio, U. S. A., whose work on surgical shock and other aspects of practical scientific surgery and medicine give him a place of eminence in modern medicine, reports (*Journal of the American Medical Association*, November 3rd, 1906) a series of seventy-four animal experiments, culminating in a series of cases where the results of the former series were applied in man. Using the method of Carrel, by which arteries and veins of various sizes may be so anastomosed as to be impervious to blood and free from clotting, the transference of blood from one animal to another was found to be most definitely accomplished by anastomosing the proximal end of an artery of the donor into the proximal end of a vein of the donee; the only requirement being that the blood of the two animals be isotonic. The transfused blood neither suffers nor causes impairment, no hemolysins are produced and the transfused blood becomes a perfect substitute for the lost blood. The first human case in which the priuciple could be applied was that of a male, twenty-three years old, ill with nephrolithiasis. At operation four large stones were removed from the pelvis of the kidney, and the wound formed in bisecting the kidney was packed with gauze hemorrhage being readily controlled during and after the operation.

"On the fourth day oozing began to appear on the dressings, and there was also hematuria. This continued until the morning of the fifth day, in spite of all the measures that could be employed against it, including packing, pressure, etc. By evening the condition of the patient had become alarming. The hemoglobin was reduced to twenty-five per cent. the red cells to 1,800,000, the pulse was 160 beats to the minute and barely perceptible, the respirations forty-eight per minute and gasping and the patient was unconscious. Treatment by posture, *saline* infusion, bandaging, stimulants, repacking *adrenalin chloride* solution, etc., was of no avail. It was clear that the terminal stage was at hand with all the resources at hand exhausted. It seemed, therefore, a suitable case for transfusion and one which would afford a crucial test of its value. A willing donor in the

person of the patient's brother was at hand. Under local anesthesia an anastomosis between the proximal end of the radial artery of the donor and the proximal end of the basilic vein of the donee was made, and the blood was allowed to flow steadily for thirty minutes. As a result the patient promptly came out of his unconscious state, the pulse and respiration fell, the blood pressure rose from sixty-three to ninety-four millimeters of *mercury*, the hemoglobin rose from twenty-eight to fifty per cent, and the red cells from 1,800,000 to 2,900,000. In the donor the hemoglobin fell from 100 to seventy per cent. and the red cells from 5,500,000 to 4,600,000 per cubic millimeter. By this time the patient was in such good condition that the original plan of doing a nephrectomy was followed, using *ether* as an anesthetic. The operation was well borne. . . . The following morning the condition of the patient was unsatisfactory on account of decomposing blood clots filling the bladder. Under *cocain* I made a suprapubic cystotomy, washing out a large quantity of foul smelling urine and removing quantities of infected blood clots. During the day following this there was total suppression of urine and marked uremia . . . This was overcome, and improvement continued for two weeks, during which time a large part of the lumbar wound healed. A severe cystitis continued. Then suddenly a profuse hemorrhage set in from the bladder and continued for two days, in spite of all treatment. The red cells and hemoglobin again fell as before, and his condition became critical. At this time another brother served as donor. The patient's condition immediately improved again, the red count reaching 3,000,000 and the hemoglobin fifty-four per cent. No further hemorrhage occurred, and the patient was discharged from the hospital cured on the twenty-fifth day after the second transfusion. He has resumed work and shows a count of 6,400,000 cells.

Two patients with typhoid hemorrhages received transfusion, though practically in extremis. Both were very much revived by the operation, although one succumbed to further hemorrhage and the other to double parotitis. Still another transfusion was for a secondary renal hemorrhage following nephrolithotomy. The patient was a very poor risk and had been delirious for two days. As the fresh blood flowed into his vessels his delirium entirely disappeared and the lumbar wounds healed, though an abdominal wound, made for exploratory purposes, never healed, and finally peritonitis caused death. The blood-count, however, was maintained to the end. The last case was that of a woman who had received medical treatment for four months for bleeding from the bowels. Hemoglobin about twelve per cent., red cells 1,200,000. It was not considered safe to anesthetize. The transformation was extraordinary. The lemon-yellow gave place to white, then to pink and red, the blood count was more than doubled and the hemoglobin trebled. All other treatment was withdrawn and the hemorrhage entirely ceased.

The donors in each case regained the lost blood in from five to seven days, and were kept from work only on the day of the transfusion. No unfavorable effect whatever was noticed in the donee. In other words, the conclusions reached in the laboratory were wholly realized in the clinic.

Dr. Crile says: "The transformation in these cases has been unequaled in my surgical experience except in the relief from asphyxia by intubation."

Pathological Notes.

Under the charge of JAMES L. MAXWELL, M.D.

MICROSCOPIC OBJECTIVES.

We do not for one moment wish to appear as advertising any firm's goods, nor have we any personal knowledge which would justify us in doing more than simply bringing the statements before the notice of our readers; but we feel that the possession of a good microscope at a reasonable figure is so extremely important for medical missionaries that we quote the following paragraph in extenso :—

"We understand that Mr. Henry Gowlland, optician, of Selsey, Chichester, has perfected a new one-twelfth in. object glass, oil immersion which he guarantees to be entirely of British manufacture, but what is of more importance to our readers is that no soft glass is used in the objective and that it will stand any climate. The objective is beautifully finished and the price is only fifty-five shillings, which compares very favourably with the objectives of foreign manufacture of the same power, which are retailed in this country at £5 and upwards. Intending purchasers would do well to write for further particulars before purchasing elsewhere."—*Journal of Tropical Medicine*, September 15th, 1906.

SPIROCHÆTE PALLIDA IN YAWS.

In one specimen taken from a papilloma in recurrent yaws, numerous spirochætes were observed. The method of staining was by Giesusa's solution and gentian violet. These spirochætes possessed similar characters to those of the spirochæte pallida as already pointed out by Castellani, but the staining was fainter. Loops in the course of the filament were observed as in the S. pallida.—Dr. ALEX. MACLENNAN. *British Medical Journal*, October 20th, 1906.

REPORTS ON PLAGUE INVESTIGATIONS IN INDIA.

A preliminary report of the Government Commission in India from the *British Medical Journal*, October 20th, 1906.

The most important of the results dealt with in this first report of the work of the Commission are concerned with experiments upon the transmission of plague by fleas.

From a series of experiments, in which altogether between 300 and 400 animals were used and for the details of which the original must be consulted, the authors conclude:—

1. Close contact of plague infected animals with healthy animals, if fleas are excluded, does not give rise to an epidemic among the latter. As the godowns (in which the experiments were conducted) were never cleaned out, close contact includes contact with fæces and urine of infected animals, and contact with, and eating of food contaminated with fæces and urine of infected animals, as well as with pus from open plague ulcers.

2. Close contact of young even when suckled by plague-infected mothers, did not give the disease to the former.

3. If fleas are present, then the epidemic, once started, spreads from animal to animal; the rate of progress being in direct proportion to the number of fleas present.

4. An epidemic of plague may start without direct contact of healthy animal and infected animal. Thus in the case of one of the ex-

periments the healthy guinea-pigs were not put in until the last inoculated guinea-pig had died and been removed.

5. Infection can take place without any contact with contaminated soil. Thus several guinea-pigs and a monkey placed in wire cages two inches above the ground developed plague.

6. Aerial infection is excluded. Thus guinea-pigs suspended in a cage two feet above the ground, which distance is outside the jumping capacity of a rat flea, did not contract the disease, while in the same godown those animals allowed to run about and those placed two inches above the floor became infected.

7. Plague can be transmitted by the rat flea not only from guinea-pig to rat but from rat to guinea-pig. Further it can also be transmitted from guinea-pig to monkey.

As a result of a further series of experiments carried out in plague infected houses it was shown :—

That animals protected from fleas by means of a sufficiently broad layer of tangle-foot and placed in plague infected houses do not contract plague, but of the control animals, not so protected, twenty-four per cent. developed the disease.

Out of 247 fleas caught on the tangle-foot, sixty per cent. were human, thirty-four per cent. were rat and five per cent. were cat fleas. Plague bacilli were demonstrated in the stomach contents of one out of eighty-five human fleas dissected and of twenty-three out of seventy-seven rat fleas.

Further researches were made into the question of the existence of chronic plague in rats in localities where plague is endemic but at a time when no epidemic existed :—

The existence of chronic plague in rats during the season when neither plague cases nor any acute plague among rats occurs, has been systematically searched for by the Commission in the case of two villages—Kasel and Dhard—in the Punjab, in which plague has recurred annually for three years without discoverable re-infection. Observations on these villages commenced in December, 1905, at a time of year when neither human plague nor rat plague, as far as could be discovered, existed. There was no special mortality among rats, and dead rats were seldom found. An extensive rat catching was undertaken with a view to finding out whether plague existed among these animals. During December 1,800 rats were caught alive and carefully examined. Of this number none were found to be suffering from ordinary acute plague but seven, which until examined post-mortem evinced no signs of illness, were discovered to have chronic abscesses containing plague bacilli.

Book Reviews.

RETINOSCOPY (or shadow test.) By James Thorington, A.M., M.D. Fifth Edition. P. Blakiston's Son & Co., Philadelphia. Price $1.00 (Gold).

This book is the work of a man who always does his work well. Like all Dr. Thorington's other demonstrations of optical procedures, it teaches the subject in simple, clear language in a way that compels understanding. To those of us who prescribe glasses for the Chinese, so many of whom, though illiterate, yet as carvers, sewing women or what not, do near work, and so many of whom need refraction after cataract and other operative procedures, a thorough understanding of the shadow test, as a means of checking results or even of getting any sort of results, is next to a necessity. The book is not strictly for such as have long used the method, though there are helpful suggestions for the most experienced; but for those who have yet to grapple with the whole matter, it is an admirable review of the subject.

The schematic eye, described in Chapter 1 is hardly all that the author claims. It is a useful preliminary exercise for student years, but for those who have their own clinical subjects in any numbers, or who are accustomed to the living subject, no schematic eye can compare with the natural eye.

We know Dr. Thorington himself, his books and his eye, and have often heard him lecture too. Eye, good, books, better, Doctor, best.

Z.

HOSPITAL DIALOGUE IN SHANGHAI THOO-BAK, by W. H. Jefferys, A.M., M.D. St. Luke's Hospital, Shanghai. American Presbyterian Mission Press.

Although doctors have been working among the natives of Shanghai and its district for more than half a century, none of them had attempted to collect and publish the every-day expressions used by the people in sickness until this neatly printed hand-book appeared.

Hitherto missionary physicians have had to acquire the peculiar vocabulary of their profession by the long and laborious method of working it out for themselves. The writer of this useful book has conferred a lasting benefit upon his fellow-professionals as well as upon all others who come in daily contact with suffering humanity.

The often perplexed and well meaning doctor will here find a solution to his many difficulties, and if he wishes to get at the history of

a patient or give him medical directions, he need only consult one or more of the many sections of this excellent book.

At a glance he can see written in clear English, Chinese or Romanized Chinese the very questions he would wish to ask a patient and also many of the probable answers he would receive. Such a simple direction as "Lie on your back," would not come readily to the lips of many persons acquainted with the local dialect and yet here they will be able to find dozens of similar phrases most happily expressed in the true vernacular.

This book ought to find a place in every physician's medicine case, working or travelling within a radius of a hundred miles of Shanghai, as, though written especially for the Shanghai dialect, it has a much wider range of usefulness, and doctors who reside in Soochow, Ningpo etc., will find it, with slight modifications, meet all their needs.

The book will slip easily into the pocket, and the modest price of $1 brings it within the reach of all.

We hope it will have a large and extensive circulation and thus supply the very needs for which it has been written.

F. C. C.

Reports.

Central China Medical Missionary Association Annual Report, 1906.

According to the diagnosis of several of our oldest members the past year has been the most successful one of the Association. It does not merely exist, but develops and is proving to be an ever increasing force for medical missions in China. Its influence bas spread, and to-day we read that in other parts of China, although under far less favourable conditions, or situation, similar associations are being commenced. Thus it behoves us not only to maintain the high standard of proficiency, but ever to be the stimulating factor in the progress of medical missionary work.

Except for one item every dish has beeu partaken of with more or less relish that was presented to the Associatiou on the Menu at the beginning of the year. We have attended thirteen meals with an average attendance of 9.5.

The various dishes served have been matured in thought, scieutifically arranged and artistically produced in such an appetising aud digestible form that even the most chrouic dyspeptic amongst the recipients could not possibly fail to assimilate and benefit by an over indulgence of the good things provided.

The enthusiasm of the members of the Association has found an opportuuity for work in the preparation and production of the following series of pamphlets: Dysentery, diarrhœa, constipation, artificial feeding of infants, syphilis, smallpox, prevention of consumption, etc., etc. One of these is already published and the others are either evolving in the minds of the deputed authors, or passing through the various prescribed stages to their final and glorious issue.

The new regulation of "a brief written history accompanying each case shown," has been greatly appreciated by the secretary, *when it has been done.*

A few of the papers read before the Society have been published in the C. M. M. J., and others are under the rigid but kindly scrutiny of the editors.

During the year a Purchase Committee has been formed. Their arduous and untiring efforts have already resulted in the various hospitals being able to obtaiu their drugs, dressings and supplies at a much cheaper rate thau hitherto.

An effort has been made to form a circulating library of medical books and magazines.

During the year we have had the pleasure of welcoming as new members of the Association Dr. Miss Bretthawer, of the American Baptist Mission, Hanyang; Dr. Miss Vickers, of the Wesleyan Mission, Wuchang; Dr. Cormack, London Mission, Hankow. Also, we have welcomed the return of Dr. S. R. Hodge, of the Wesleyan Mission, Hankow, one of the oldest members of the Association. Several doctors have been introduced to the meetings during their journey through the centre en route to their various stations.

It is difficult to select a few cases from the long list of interesting ones shown to the Association during the year.

(1). One was a man age 22 from Nanking, with a tumour the size of a hen's egg under his tongue. It was of seven years' duration. Twelve months before it had been (?) removed at a foreign hospital. It was teuse, not painful,

fluctuated slightly, not inflamed. His tongue was pushed up, so that it was difficult to eat and speak.

After *complete* removal it was found to be a dermoid cyst.

(2). Interesting instructive case of ruptured femoral aneurism.—The signs and symptoms suggested, and it had been diagnosed tor an abscess. It was ligatured above, and the man had an uninterrupted recovery.

(3). Composite odontome.

(4). A girl, age eight, twenty-seven inches tall, weighed twenty-nine pounds, had never talked or walked. Tongue large, hair coarse, pendulous belly.

The interest was that the child was by a second wife; his first wife had presented him with a similar child, which had died.

(5). A man, age thirty-three, who fifteen months before was carrying a load of beans when "his left eye shot out." He did not fall ahout or experience any pain. One month afterwards his right eye shot out. He was able to see for two months and then became blind.

Both his eyes were protruding for one inch outside the orbit, were covered with scabs. Slight pulsation was noticed, but was more marked in his lids. Marked heaving pulsation was noticed in both carotids and also over his left chest. Heart was enlarged half an inch outside N. L., systolic bruit at aortic and pulmonary areas pusystolic thrill and bruit at mitral area.

Radial pulse were not of equal ratio or tension. No evidence of intra-cranial pressure. Did not improve very much with rest and digitalis.

The thanks of the Association are due to the ladies who have so kindly and gracefully entertained the members of the Association to tea, after the meetings.

W. ARTHUR TATCHELL,
Hon. Sec

PROGRAMME 1906.

Date.	SUBJECT.	Meeting Place.
1906.		
Feb. 28th	Native Medicine and Surgery and their Sequelæ.....President	Concession
March 14th	Clinical Meeting	Wu-sen-miao
" 28th	Discussion: *Co-operation and Specialization*.....Dr. P. L. McAll	Hanyang
April 11th	Clinical Meeting.....Dr. S. R. Hodge	Wuchang
" 25th	Clinical Meeting	Concession
May 16th	Surgical Treatment of Facial Neuralgia.....Dr. W. A. Tatchell	Wu-sen-miao
" 30th	Present Means of Medical Education.....R. Wolfendale	Hanyang
	SUMMER RECESS.	
Sept. 26th	Clinical Meeting	Wuchang
Oct. 10th	Diagnosis and Treatment of Diseases of Children..Dr. Miss Gleiton	Concession
" 24th	Spiritual Aspect of our Work.....Dr. McWillie	Wu-sen-miao
Nov. 14th	Clinical Meeting	Wuchang (a.m.)
" 28th	Operative Gynæcology and Obstetrics.....Dr. Miss Cousins	Hanyang
Dec. 12th	Clinical and Business Meeting	Concession

Tooker Memorial Hospital. Report 1906. American Presbyterian Mission, Soochow, China.

Our hospital has felt its little share in the growth, gaining somewhat in every line of activity. Aud we have felt the touch of awakening spiritual power that has just begun in this country.

To pass on to the more medical events. One of the first, in time and importance, was the arrival of two Americau habies within two weeks of each other—Kenneth Kepler and Margaret Crawford—both sweetly unconscious of their superiority to the average hospital patient.

Later came what threatened to be a serious break in the work, not for ourselves only, but for all China. Vague restlessness on the part of the people, mobs in different parts of the country, in Soochow great mass meetings about the foreign invasion, and warnings for us not to show ourselves too freely on the streets. Then a swift message from Shanghai of riots, and a call to escape for safety. Even after our return to Soochow there were days of uncertainty as to the outcome and nights when a slight alarm would set our nerves thrilling. An unusual clamor in the next village, the accidental burning of a foreign house, a midnight raid on gamblers in a temple opposite, where we could see the lanterns flashing against the dark walls and hear the shouts of the attacking party and the clattering of falling bricks,—all of these things seemed at the time to be directed against us and added interest to our lives!

There have been the usual number of opium suicides as well as a few cases who came to the hospital to break off the drug habit. The editor of one of our best American medical magazines, in speaking of the opium curse, refers to the evil as greatly exaggerated by the missionaries, "who presumably know too little about the matter." If they know too little it must be from seeing too much; and while we do not advance the fact of opium suicides as argument against the opium curse, yet they do add to our hatred of the drug, and we wonder to see a man leave the room for his pipe in the intervals of helping to revive a friend!

An interesting class of patients out here are those who find the root of their troubles in "K'yi" or temper. Although of a phlegmatic disposition the Chinese, when roused, are prone to give way to most ungoverned fits of passion, and it would be strange indeed if one could emerge from one of those typical outbursts none the worse physically or morally. Sometimes it means insanity; often the result is heart-disease. We had a good specimen of this latter class in one of our patients who came to us a perfect wreck, passsionate and perhaps slightly deranged. It was odd to see her sit hour after hour cleaning her teeth, or dipping her hands into the indispensable basin, like the classical heroine who endeavored to wash from her hands the spot that had dyed her soul.

F. F. CATTELL,* } *Physicians*
MARY E. FITCH, } *in charge.*
MARY LATTIMORE, *Matron.*

* Absent on furlough.

Fifth Report of the Hwai-yuen Hospital, September 1st, 1905—April 30th, 1906.

During this period the work has continued very much as it was during the previous year. Certain of the statistics show a slight advance in the number of patients treated or operations performed, while others indicate a little falling off as compared with last year's report, which may be accounted for by the fact that the time of the foreign physician has been considerably occupied by work that should more properly fall to an architect or builder.

In certain lines an increase in the amount of good done has been unfortunately prohibited by our cramped quarters. For a time during the latter part of 1905 for weeks together every bed was full and the wards were crowded far beyong their proper capacity. Yet we were almost daily forced to turn away needy cases; many of them suffering constant agony from vesical calculus. At one time we kept a register for cases applying for

treatment and urgently needing operation, and appointments were recorded for nearly two months in advance. It is unfortunate that many of these did not return again; doubtless discouraged by the first fruitless and painful journey. In spite of this handicap we have peformed forty operations for calculus during these eight months as compared with thirty-six for the preceding twelve.

Accordingly we report with solid satisfaction that a reasonably commodious piece of land was purchased last fall and that a physician's residence has been built while the plans for the hospital were being drawn up. These are now completed (September, 1906), and we hope that the work of construction will soon be begun. An undertaking of this kind is necessarily slow in completion at such a distance from the coast as we are situated, and it may be more than a year before it is finally complete. But we can at last see a term set to the time of probation which has been passed in the present hospital.

The generosity of a friend in New York has provided the necessary funds for erecting a building that will both in size and general construction adequately fill the needs of our growing work, and we have reason to believe open new fields of usefulness.

We have had further good news to the effect that the generosity of a member of the Central Presbyterian Church of New York has provided the support of a woman physician. It would be hard to say which will be the means of a greater advance in our usefulness to the community, the new hospital or the new physician.

We have treated much the same kind of cases as in former years. The 144 operations for entropion and seventeen for pterygium were nearly all performed by Mr. Chu, and the result has almost invariably been excellent.

SAMUEL COCHRAN.

Correspondence.

To the Editor of

"THE CHINA MEDICAL MISSIONARY JOURNAL."

DEAR DR. JEFFERYS: Will you allow a suggestion in regard to your tabulating of the statistics of the various hospitals in China. Why not omit those from your printed list which send no reports? For instance it looks a little queer to see the Lonisa Y. Boyd Hospital, Chinanfu, put down on the list, when this institution has not been open for the past two years and a half, and Dr. Burnham has been out of the country for the same length of time, with no prospect of her returning. I notice a number of other cases, where evidently the list of the previous year has been copied, but no returns have been sent in. An arrangement in some sort of alphabetical order, too, would be a great help in finding what one wants, say in order of location by alphabet.

With kindest regards,

Sincerely yours,

J. B NEAL.

TSINAN, January 19th, 1907.

To the Editor of

"THE CHINA MEDICAL MISSIONARY JOURNAL."

DEAR DR. JEFFERYS: Herewith is a further contribution for the JOURNAL. I shall not trouble you so much in the future, as my reign as Secretary to both Kuling and Hankow branches of the Association, has ended. But I do feel keenly the importance of the work which the Association is attempting, both by the JOURNAL and its various branches.

I also recognise the devotion and untiring energy of the officials and think that the humble and meek of us should do our utmost to support you.

With every good wish,

I am,

Faithfully yours,

W. ARTHUR TATCHELL.

"No trouble, Doctor, we assure you."—ED.

WESLEYAN MISSION HOSPITAL,
Hankow, March 1st, 1907.

To the Editor of

"THE CHINA MEDICAL MISSIONARY JOURNAL."

DEAR SIR: In answer to several letters "re" election of new members and its "li" I beg to reply that the only "li" that appears to my dark mind is that (1) from the papers being returned the secretary is able to know who looks at their JOURNAL and who are interested in the Association; (2) it provides him with a little scribbing paper; (3) it swells H. I. M.'s postal revenue. I think the present system is useless, and the subject of election of new members should come up at Conference.

I am, etc.

C. J. DAVENPORT.

SHANGHAI, February 6th, 1907.

Personal Record.

BIRTH.

At Tainan, Formosa, on 10th February, 1907, the wife of JAMES L. MAXWELL, M.D., of a daughter (Hilda Elizabeth).

A Remarkable Fibroma.
J. L. Maxwell, M.D., Tainan.

The
China Medical Journal.

VOL. XXI. MAY, 1907. NO. 3.

Original Communications.

[All papers must be in the hands of the Editors two months before date of publication to insure their appearance in the following number The editors cannot undertake to return manuscripts which are sent to them. A complimentary edition of a dozen reprints of his article will be furnished each contributor. Any number of reprints may be had at reasonable rates if a *written* order for the same accompany the paper.]

WANTED A DIAGNOSIS.

By C. H. GRAHAM ASPLAND, M.D., C.M., F.R.C.S.E.

The patient, myself, aged forty-two. Residence in China less than two years. Health: never had any sickness in my life that I can remember. Previous to coming to China lived a hard, rough life on the Labrador coast for several years. Height five feet seven inches, weight 170 lbs. Onset of disease took place in a missionary monthly meeting in Peking, during a very interesting address on Russia. Within half an hour large globular swellings arose in the palms of the hands, on the exterior surfaces of forearms and the external surface of thighs, not painful, only inconvenient, as I could not shake hands, or even close them. In the hands they were the size of pigeon eggs and in the other parts larger and more diffuse. For the moment angio-neurotic œdema flashed into my mind, and I immediately exhibited myself to about half a dozen medical missionaries present. The meeting over I got into my cart and got home in about an hour. On trying to get out of the cart I found both legs quite stiff, not due to any cramped position, but felt as though the skin was thickened and wouldn't stretch. I immediately undressed for bed, and was decidedly interested to find my lower limbs covered with large purpuric patches, well defined, with a well-marked urticarial border. The patches were none of them smaller than a five-cent piece; the majority being about an inch long and very many extending up to three or four inches in diameter. All the time I felt perfectly well, had no elevation of temperature and slept perfectly. On waking the urticarial condition had gone, but the purpura remained (the patches passing through the usual stages and finally disappearing

in a yellowish green in about five days.) The next evening, while sitting in my study quietly about five or six o'clock, I felt the same stiffness commencing in the thighs, which gradually increased as the night went on, and I was obliged to go to bed about nine o'clock, because if I sat I found it difficult to rise; had no pain of any description, no temperature. On undressing found another crop of purpuric patches with urticarial edges. This continued every day for about eight or nine days; some days worse than others. I was about all the time perfectly fit, until the stiffness began to come on in the evening. At this stage I called in medical help, or at least my wife did. I was questioned in the usual way as to errors of diet, etc. No pain, no temperature, no diarrhœa, not even a headache. I was given some syrup of *iodide of iron* and advised to give up smoking or rather reduce it to the aggravating condition of one smoke a day. No improvement. At the end of the second week I developed cardiac irregularity, tumbling rhythm and missing a radial beat in every four, and as far as I could make out with a stethoscope (my medical man wouldn't tell me), a mitral systolic murmur of a roughened type. I was ordered to bed for three weeks, not even allowed to sit up for food for the first week, and no more purpura appeared, and the cardiac condition improved, so that I lost the consciousness of having a heart.

I had a photograph taken of the purpura, but it unfortunately got spoilt. Now what is it? I thought I knew something of the various forms of rheumatism, having served a fair apprenticeship under Stephen Mackenzie at the London Hospital. I've seen plenty of erythema nodosum and purpura rheumatica, but not in patches four inches in diameter, unaccompanied with pain or temperature. I've seen plenty of scurvy on the Labrador coast amongst settlers and Eskimo, but what could give me scurvy, with a diet quite as generous and more varied than when I am at home in England. The neurotic œdema (?) appeared but once, and the urticaria always surrounded the purpuric patches. I know rheumatic urticaria, but not without constitutional disturbance, and then not accompanied with purpura of the size I had. In the latter part of the illness, before going to bed, I had smaller spots of purpura on the abdomen, chest and face, but the larger patches accompanied with urticaria were confined to the upper and lower limbs.

That it is a rheumatoid disease I strongly believe, but which? Perhaps all three, but why no disturbance other than the cardiac, which did not appear until the patches had ceased to come out. I could not examine the blood, or make a count, as I have not the necessary apparatus.

SUGAR AND THE ETIOLOGY OF APPENDICITIS.

By W. F. PLUMMER, M.R.C.S., L.R.C.P.

The appendix is an organ of interest to the physiologist, anatomist, physician and surgeon. Its functions have given origin to interesting papers. The varied positions it assumes have added to the anatomist's labours and the surgeon's difficulties ; and the mildness of an attack of inflammation may simulate an innocent bout of indigestion, while a severe attack may carry off the patient before the disease has been diagnosed.

Of recent years appendicitis has evoked much attention from the profession at home, but we in China see little of the disease and so are apt to lose our interest in it, unless this very rareness makes us seek the cause of our countrymen's greater susceptibility.

In this paper no attempt is made to explain the etiology of this disease on pathological grounds. That the lumen of the appendix becomes occluded, that concretions form, that in some cases the swelling of the lymphoid tissue is akin to the tonsillar enlargement associated with rheumatism and also cured with *salicylates*, that more cases occur in males than females, that more cases occur between April and August than at other times of the year, and that the disease is possibly infectious, are facts collected by the pathologist, and while interesting do not tell us how the future generation may diminish their risk of trouble in this organ.

This is rather an endeavour to compare the diet of the Chinese and our forefathers, in whom appendicitis rarely occurred, with the diet of the present day European and American; also to suggest that the excessive use of refined sugar is the article of diet which is most likely to be the cause of our susceptibility.

Appendicitis seldom seen among the Chinese :—

That appendicitis is a rare disease among the Chinese is the opinion of the majority of the medical practitioners in this country, as will be seen by the replies to the post-cards kindly sent out for me by the Presbyterian Press last year.

One hundred and sixty-eight answers were received, and the replies may be tabulated as follows :—

44	said:	"Yes," the disease is very rarely seen.
69	,,	Had seen a few cases, but thought the disease uncommon among the Chinese.
49	,,	Had not seen any cases at all.
162		

Making a total of 162 who replied in the affirmative.

On the other hand, four think that the disease is not as uncommon as we imagine, and two, that the disease occurs as often here as at home, but that these acute abdominal cases are not brought to us for treatment, making a total of six who replied in the negative.

Appendicitis more common in England now than fifty years ago.

That appendicitis is much more commonly seen in England to-day than was the case fifty years ago seems hardly worth stating, as the fact is so generally recognised, but it is well to know that statistics also bear testimony in the same direction, as can be seen in papers by Pitt[1], Chalmers Watson[2]. Jones[3] also shows that while of recent years the death rate has decreased, yet the number of deaths per thousand, caused by gastro-intestinal disease, has during the same period increased, so that the decrease in the total death rate is accounted for by the smaller number of deaths due to infectious and preventable disease.

Theories as to the cause of the increased prevalence of appendicitis.

Seeing then that the Chinese and our forefathers suffered so much less from this disease, it seems reasonable to conclude that the modern European has acquired some habit of living, or eating, which predisposes him to acquire this disease and many suggestions have been made.

Dr. Chalmers Watson in the paper already quoted thinks the cause lies in the increased quantity of meat consumed.

Dr. Jones[4] suggests that the use of preservatives in tinned foods and the increased use of foods so preserved, may have a predisposing influence towards gastro-intestinal disease.

The rush of present day life with the habit of bolting the food without sufficient mastication, is thought by many to be an important cause.

Dr. J. Sim Wallace, in a very interesting little book entitled "The Rôle of Modern Dietetics in the Causation of Disease," expresses the opinion that many of the present day troubles which so seldom affected our forefathers are due to the habit of eating soft refined food. It is his deliberate opinion that food demanding thorough mastication in the mouth is not only best for the teeth, but for the stomach and intestines also. Many children instead of using their teeth are given nothing but milk-coated pap food, which allows the function of mastication to fall into desuetude, and the child, when he finds a lump in his food, falls into the habit of swallowing it whole; hence the teeth decay and the digestive functions become perverted.

All these circumstances lead to a demand for still softer and more nutritious foods, and the evils which result are in geometrical progression. Dr. Wallace says it is a general law that animals are adapted to that enviroument under which they have lived for countless generations and are not adapted to a changed environment when such is forced upon them. Applying this to mau he says that our ancestors lived largely on natural foods, which to-day are subjected to elaborate refinement and cookery, and the increased prevalence of gastro-intestinal disease shows that we are having difficulty in adapting ourselves to the new environment, and that soft highly nutritious foods, such as bread soaked in milk, milk puddiugs, soups, and all such like foods which do not require masticatiou, are harmful to the healthy child. While admitting tbat in disease such foods are necessary for a worn out organ, yet in health, food with a considerable proportion of iuert or indigestible matter which will need mastication, is needed to maintain a high staudard of digestive efficiency.

Such are very briefly Dr. Wallace's views.

All the above views are importaut, especially Dr. Wallace's, and I should hesitate to make any additions were we not surrounded by a people whose diet is so different from our own, that we have opportunities for observation which our otherwise more favoured brethreu iu the home couutries do not possess.

Diet of the Chinese and of our forefathers compared with the English diet of the present day.

The diet of the majority of the people in Wenchow is as follows: Rice, the staple article, is prepared in two ways; generally hut little water is used in hoiling, and when prepared tbe separate grains of rice are distinctly visible and in some cases the rice looks almost dry, but in the mouth feels quite soft and is generally swallowed with a minimum of mastication. The other method differs only in having a larger quantity of water added, so that finally a semifluid, soft, milk pudding like appearance is attained. This is almost the only article of invalid diet used by the Chinese here and is supposed not to require any attempt at mastication, so when I have exhorted a dyspeptic patient to masticate thoroughly a very common reply is, "Oh I take chuh," i.e., congee.

In addition to the rice there is what we here call the p'ai or relish. Each table of eight has eight dishes and in each dish is a vegetahle or some fish, so that the eight dishes might contain various vegetables, turnips, bean curd, shrimps, salted fish, and very occasionally a little pork. As there are eight different bowls for the eight persons to help

themselves from, this gives the equivalent of one bowl of the mixture for each person. The fish and shrimps at each table could probably be all placed on four small saucers, so that each person only gets about half of what each saucer would hold; as a consequence the nitrogenous food at each meal is small in amount. A dietary like this is considered very good quality by the people here, and there are numbers, probably the majority of the labouring classes, who rarely have anything beyond a little vegetable with their rice, and many who cannot get rice and have to be content with potatoes.

Sugar is very seldom used; in fact not at all in the usual way, only occasionally at feasts, and then usually it is the native product and not the refined imported article. This diet is thus seen, as compared with our own, to be absolutely deficient in sugar, very deficient in fat and proteid; on the other hand, starch is in excess.

If we now consider the diet of our ancestors we find that, in their case also, sugar is the one item that is most conspicuous by its absence. One hundred years ago it was almost unknown; indeed fifty years since, at eight pence a pound, it was a luxury which the poor could ill afford. The diet was also less refined and there were no tinned foods, and among the working classes there was less nitrogenous material consumed. This lack of nitrogenous food refers more to the beginning of the nineteenth century even than to the earlier periods in our history, for in Froude's History of England we read that in the times of Henry the eighth the people "were a sturdy high hearted race, sound in body and fierce in spirit, and furnished with thews and sinews which under the stimulus of 'these great shins of beef,' their common diet, were the wonder of the age."

Criticism of the various theories as to the increased prevalence of appendicitis. The increased consumption of meat:—

In recent years owing to the importation of frozen meat, and to the larger wages received by the working classes, there has doubtless been an increased consumption of flesh, so that one flesh meal a day is a very common allowance, but there seems to be no evidence that the intemperate use of this article is on the increase. The middle classes who could afford meat in the olden times, probably took as much then as now.

Insufficient Mastication:—

That insufficient mastication is a cause of indigestion there can be no doubt, and the Chinese, who are very guilty of this bad habit, are often victims of dyspepsia. The practice of helping themselves from common dishes in the centre of the table leads to rapid eating, as the

tortoise would find all the tit bits gone if he did not keep pace with the hares, for on these occasions the hares do not go to sleep. Yet although so given to bolting their food, the Chinese apparently do not suffer from appendicitis to the extent that we do, so that this cause by itself seems insufficient.

In reference to tinned foods, it seems sufficient to mention that appendicitis is most common in Europe and America among the wealthy classes who are not given to the use of these foods.

The use of refined foods :—

It has already been stated that the Chinese often take their rice boiled until quite soft, so that the use of pap-like food alone does not seem in itself to cause the disease under discussion.

Sugar as a cause of Appendicitis.

Chemically sugar seems an ideal food, as it is all used, being burnt up into *carbonic acid* and water, much in the same way that alcohol is split up in the body, yielding so many units of energy in the shape of work and heat. That it is a valuable article of food is, I think, the teaching of physiology. It has been stated that soldiers who were allowed a certain ration of sugar per day during manœuvres, were in a better condition at the end of the week than a corresponding number of men who had been without.

On the other hand, there are observers who hold a contrary opinion, among whom is Ch. Féré *(Rev. de Méd.*, Paris, January, 1906), who "brings forward experimental evidence to show that there is no paradox in the statement that sugar may be a condiment rather than a food. Most observers who have examined the effect of the ingestion of sugar on the power of doing work, but not all, have come to the conclusion that sugar directly increases this power. Féré, quoting elaborate experiments done on himself with a Mosso's ergograph, points out that the sensory effect of the sugar's sweetness has been overlooked; he finds that sugar diminishes the power of working, excepting for the short initial period during which the sensory stimulus of its sweetness lasts, and, like any other sensory stimulus, increases the power of doing work. Hence sugar, like kola, coca, or alcohol, diminishes the amount of work that can be done in an hour or in a day, but increases the force of a single shorter effort ; sugar is a stimulant, and, like anything else that excites, accelerates the onset of fatigue."

Dr. Sim Wallace in the book already quoted, says that "certain combinations of food are distinctly advantageous, while the separate component parts may be actually harmful. Thus sugar, cellulose, vegetable acids and bitter principles, combined as they are in many

fruits, are admittedly beneficial, while each one separately may be actually harmful if indulged in freely." In another place he says: "The refinement of food stuffs from which sugar is obtained is carried to such an extent that, instead of the succulent tuber of the beet, or the fibrous sugar cane, we get the highly concentrated and crystalline product we know as sugar. Now it is known that sugar can be easily swallowed in quantity, and the result on the gastric digestion is to cause irritation and an excessive secretion of mucus in the stomach. The excessive secretion of mucus takes place in the mouth from like irritation. The harmful effect on both teeth and stomach are generally recognised." On another page he says: "It is important to recognise this fact, not because ruin of the teeth gives rise to many more serious troubles, nor because injury to the teeth means ruin to the power to digest and relish some of the most luscious foods, but because it has become the fashion to belaud the dietetic value of sugar and to look upon it as an important food, while in reality it should be sparingly used and regarded rather as a condiment. What does it matter whether we can turn sugar into so many units of energy, if at the same time it ruins the teeth and irritates the stomach to such an extent that healthy and vigorous digestion is lost?"

It should be remembered that refined sugar as we use it is very different from the native article. In Ping-yang and other places within a few miles of Wenchow sugar is made by passing the cane between stone rollers which are turned by an ox; the juice which escapes is collected in a pan, boiled, and the clear syrup is ladled off and allowed to cool and crystallise.

In modern sugar refining, according to Chambers Encyclopædia, the juice is expressed by complicated machinery, it is clarified by using milk of lime, and sometimes *sulphurous acid.* After clarification the juice is allowed to crystallise, but as there is always a certain amount of syrup which assumes the crystalline form with great difficulty or not at all, the addition of *sulphurous acid* to this syrup is found to enable a further portion to become crystalline.

There are many other details and processes, but the above is mentioned to show that very powerful drugs are used which unite with the sugar for the time being, and it seems reasonable to think that what irritating quality there may be in refined sugar is due as much to the chemical action to which it has been exposed, as to the more concentrated form in which it is presented.

Earlier in this article when comparing the diet of our ancestors and that of the Chinese, with what is in vogue in modern times among our-

selves, I endeavoured to show that the principal addition to the European dietary is sugar. That the consumption has enormously increased can be verified by reference to any modern encyclopædia, where it will be seen that at present many million cwt. are made every year, instead of the few thousand made fifty or more years ago. Not only is sugar used at each meal, in the tea, on the porridge, in the pudding, cake and jam, but at home almost every street has its sweet shop as regularly as its public house, and those who are above buying a pennyworth in one of these shops are nevertheless not above taking chocolates and bonbons from boxes which our great confectioners get up with such taste.

In conclusion may I be allowed to mention my own experience. Before an attack of appendicitis two years ago I had always masticated thoroughly, had taken but small quantities of meat but had indulged somewhat freely in sugar. After the attack, and before the appendix was removed, I noticed that the use of sugar would bring on slight pain over the affected region, so much so that before the operation I had given up taking sugar altogether. The last two summers since the offending organ was removed, there has been freedom from pain, but during the hot weather the colon is easily irritated, especially by sugar, and although the ingestion of this article caused no symptoms of gastric indigestion, yet it was frequently followed by diarrhœa. In the winter this sensibility passes quite away. These facts suggest that in my own case at least sugar has an irritative action on the colon, which may set up the colitis which is the common cause of catarrh or severer inflammation of the appendix.

This theory, even if found to be correct, would probably not deter the majority from pandering to their sweet tooth, if only a one thousandth chance of appendicitis were involved; but since, as Dr. Wallace points out, other organs suffer, then it might be wise for us to impress moderation on all and abstinence on some.

References:—

1. Pitt, Guy's *Hospital Gazette*, 27th February, 1897.
2. Chalmers Watson, *British Medical Journal* April, 1906, page 947.
3. Jones ,, ,, ,, Aug., 1906, ,, 350.
4. ,, ,, ,, ,, ,, ,, ,, ,,
5. Epitome ,, ,, ,, 31 March ,,

Wenchow, 20th January, 1907.

SOME DISPENSARY METHODS.

By CHARLES K. ROYS, M.D., Wei-hsien.

This might well be called suggestions to beginners from one who has begun. It deals only with the most elementary problems of dispensary work: those which have to be solved first by one beginning medical practice in China. The problems presented themselves to the writer about two years ago, and his one excuse for rushing into print on these subjects is the keen desire he felt at that time (and still feels) for light from the experience of others under like conditions.

Among the many perplexities incident to beginning work under new and strange conditions these two stood out most prominently :—

1. What is the best method of handling dispensary cases to secure rapidity and thoroughness, combined with the utmost possible deference to the laws of Chinese etiquette?

2. How can serviceable histories and records of cases be obtained in spite of lack of time, inadequate command of the language, and stupidity or unreliability of patients?

Those who have settled these problems to their own satisfaction will think them perhaps too rudimentary for serious consideration, but those who, like the writer, are seeking for further light, may be interested in the conclusions given below, and some profitable discussion may be provoked.

In seeking for information on these and other subjects the writer visited most of the larger hospitals and dispensaries in this province (Shantung) and also of Tientsin and Peking. Another most valuable opportunity was afforded by a visit to Peitaiho and the helpful advice of a dozen or more medical men sojourning there. So no claim to originality is put forward for any of the methods described herein. This is simply a record of some conclusions developed from the experience of older and wiser men, by which we of the younger generation may perhaps be profited.

As to the first difficulty mentioned above. To define it a little more clearly we must postulate that every patient who comes to us should be met and treated as nearly as possible as a Chinese guest would be treated by a Chinese host. Only by so doing can we hope to make full use of the unique influence our position gives to us. How largely our efforts to gain the goodwill of those we treat are negatived by the brusque and short manner so natural to a foreigner in a hurry I suppose will never be known except to the Chinese. Yet with

forty or fifty patients in the waiting-room, all anxious for their turn, and the hour for operations (or tennis) rapidly drawing near, what is one to do? Of course, if the above postulate is not admitted, or is considered an impracticable ideal, then the difficulty largely vanishes. But those of us who are still in "old-fashioned" China will agree that it is a very real difficulty. The lamented veteran, Mr. A. G. Jones, used to say that the coolie who has least of polish in his own manner may be the severest critic of the lack of it in you. And certainly the "gentleman of the old school," who comes bowing and smiling into your consulting-room, should be met in a manner calculated to give least offence to his nice perceptions of propriety.

This may involve a considerable change in methods from those we formerly used at home. Those of us who have been associated with large out-patient work before coming to China, will think fondly of the ease and rapidity with which we could go over rank after rank of patients, whose history had been taken by one attendant, whose clothing or bandages had been opened up by another, while a third would be ready with sterile instruments anticipating every move. It is, of course, our ideal to do nothing which a Chinese helper can be trained to do properly. But it seems to the writer that when we reach the point of delegating to our assistants all the courteous observances which take so prominent a place in Chinese life, our work will lose a very large proportion of its influence, and the mere numerical gain in patients treated will not make up for it. And when the assistants see their teacher habitually careless of conventionality, they will very soon follow him in this as in other things.

The second problem will, I think, come home to more of us than the first. Probably none of us have failed to feel the criticism of the profession at home, viz., that medical missionaries do not take proper advantage of the vast amount of clinical material which passes under their hands. And most of us will admit it to be a just criticism. The question with us is, How can we make and record observations on our cases which shall be of real value when a press of work, a difficult language, and answers of patients often quite unreliable are all arrayed against us? It is not such a difficult matter to write up from memory some rare and interesting case which at once on arrival aroused our curiosity and lured us on to an exhaustive search for subjective symptoms and a thorough physical examination. But the men who are listened to at home in these days are, like the Mayo brothers in America, the men who base their conclusions on 1,000 cases of this, or 1,200 cases

of that; which means that for years they have kept systematic records of *all* their cases. The keeping of such records at once full and concise, inclusive and exclusive, confirmed by instruments of precision and carried through to the ultimate results of treatment, is a task which many of us think beyond our powers under present conditions. Yet it is evident that without such records no conclusions of value can be made.

Another criticism comes from our itinerating clerical colleagues, who complain of the difficulty of following up patients because of lack of information about them. How can these criticisms be avoided?

The writer has tried the following methods of dealing with these problems. A clear field for these methods was afforded by a new dispensary just built in the city of Wei-hsien through the generosity of Mr. J. Amherst Wisner, of Brooklyn, New York, as a memorial to his son, Mr. Clinton A. Wisner. In this building, to provide for the rapid and at the same time courteous handling of patients, the consulting room was made as much as possible like an ordinary Chinese guest room, with entrance door in the center of the southern side, table and two chairs opposite the door on the north side of the room. Patients receive tally-cards from the evangelist who is preaching in the waiting-room, enter the consulting room singly in order of their arrival, are met at the door by the physician, and conducted to the seat of honor at the left of the table. The polite Chinese inquiries as to honorable name, venerable age and exalted residence take a few seconds only, and pave the way for the other questions indicated in the list below:—

	形勢如何		現在如何	方得如何	病何時得	煙酒如何	家中如何	何病	居業	居住	姓名年紀

This list was cut upon a wooden type-block of a size to fit the heading of the pages of an ordinary Chinese account-book, ruled with vertical red lines. A student assistant at a side table takes down the patient's answers, often quite unknown to the latter. After the first questions of politeness the patient is asked at once, "What disease have you?" This usually brings out his chief complaint and heads off that wearisome narration of fancied causes which is so familiar from any ignorant patient. By asking the questions in such form that they can be answered yes or no, the list is soon run through, the assistant

being always ready to repeat a question if it is not understood the first time.

After examination and diagnosis, the patient is shown to one of two doors, placed on each side of the table where he has been seated. The one on the left (nearest the patient and in full view of the physician) has in it a window for giving out drugs. In this room an assistant is stationed, whose duty it is to give out the remedy ordered on the patient's card and to explain very carefully its administration.

The other door opens into a room with a north light for minor operations, dressings, or further examinations. Thus the field is cleared for another patient, who can be met in the same manner that the first was and shown equal courtesy. The average time per new patient is about five minutes. Return cases of course take much less time, but each return case is examined and his condition and medication noted on his original history. Nothing is easier than to form the habit of treating the patient's card rather than the patient. A man who comes in with a diagnosis of rheumatism on his card, may have a well-developed heart lesion by the time he makes his second call upon you.

Here will be outlined a little more fully our method of keeping histories. An ordinary Chinese account-book is used, because it is cheap, durable and compact. The student writes with a lead-pencil, because it is much faster than a Chinese pen. He can be taught to put down only what is important by being told to observe what is repeated after the patient in a certain tone as having a distinct bearing on the case. So although most Chinese are very poor at writing from dictation, he can, after a little practise, keep up with a very rapid conversation.

The questions given above will explain themselves. No. 6 is designed to get at the moral character of the patient, as well as his habits, for intelligently following up his case afterward. These records are handed over to itinerating colleagues at frequent intervals.

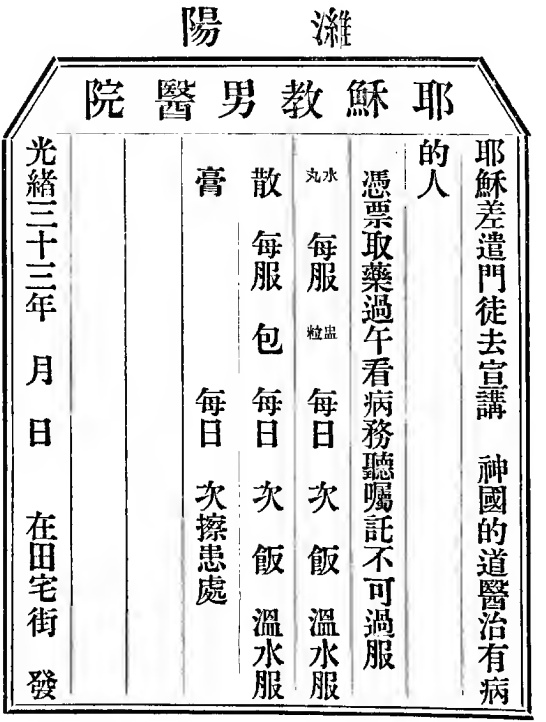
For hospital cases the same form of history is used, but printed on alternate pages only, leaving a page with twenty-four spaces for the daily records of the case. When a patient stays longer, an extra leaf may be inserted. The book is indexed at the back ; medical and surgical diseases being arranged by regions.

To secure accuracy, ease of finding on the shelves, and to save time and space on the records, all remedies have been numbered. The English names were placed in alphabetical order and numbered accord-

ingly. This system has proved exceedingly satisfactory. A written list of remedies, properly numbered, is kept on the table in the consulting-room for reference.

The patient's tally-card or ticket is marked with his history-number, diagnosis, and the number of his medication. Directions for taking are printed on it, so that verbal instructions may not be forgotten. See sample card appended.

These methods are recorded here not because they are perfect, but because they are not, and we hope to improve them. Neither are they universally applicable. But in them there may be some hint for some perplexed beginner, which will justify our taking up your valuable space.



A REMARKABLE TUMOR.

By J. L. MAXWELL, M.D., Tainan.

I send you a remarkably good photo of a very peculiar case I have just had in. Print it in the JOURNAL.

The case is that of a woman forty-eight years of age, who thirty years ago noticed a small tumour in the breast under the left nipple; this gradually protruded itself, and then the connecting strand lengthened and lengthened with the weight till it assumed its present dimensions.

The tumour is a fibroma weighing half a pound and the cord was ten inches in length. A small cuff of skin was turned back off the cord close to the breast and the cord cut through.

TWO CURIOUS CASES WITH PARASITES.

By DAVID LANDSBOROUGH, M. B., C. M., Chiang-hoa, Formosa, Japan.

I. CASE OF SINUS IN LUMBAR REGION DUE TO A ROUND WORM.

The patient was a Chinaman about twenty-two years of age. He had a sinus in the right lumbar region with its opening about one inch above the iliac crest and four and half inches from the middle line behind. There was a slight sanguineous discharge. A probe introduced into the sinus passed upwards and inwards and a little forwards to the front of the twelfth rib.

There was a history of a swelling in the right hypochondriac region which formed gradually and extended slowly downwards and backwards till after some months it pointed in the lumbar region at the position previously mentioned. The swelling was opened where it was pointing, by a Chinese doctor. A quantity of dark bloody fluid escaped, and from that time the sinus remained opened and kept discharging this fluid.

While the swelling was going on the patient did not feel well, and he occasionally passed some bloody fluid by the bowel, after which he felt better for a little.

The patient at present looks in fairly good health, but he has a little anasarca. There is no albumen in the urine.

On the 13th January, 1906, I opened up the sinus under *chloroform* for some distance. In its upper part it was much wider, like an elongated abscess cavity, so that I was able easily to introduce my finger, which passed up in front of the twelfth rib.

There I felt a body like a small india-rubber tube curled up. On introducing a pair of sinus forceps and pulling out the body, it proved to be a fair-sized round worm quite dead and looking as if it had been dead for some time.

The sinus healed readily and the patient became strong and well, but he told me, when I saw him some time afterwards, that he still occasionally passed a little bloody fluid when at stool.

2. CASE OF LEECH IN THE NASAL PASSAGES.

The patient was a Chinaman about twenty years of age. He came to hospital complaining of obstruction in the left nasal passage with some discharge of blood which was of a month or more duration. He put it down to what the Chinese in Formosa call a phin-lêng (phin, nose ; and lêng or liông, dragon), which usually turns out to be polypus. On examination with the nasal speculum I saw what looked like a polypus, except that it was very dark in colour. As usual I applied *cocaine* and then passing my polypus forceps in I seized the dark object, which offered little or no resistance to extraction. To the surprise of the patient and myself the dark object proved to be a full-sized leech, which was alive and quite active too, in spite of my application of *cocaine*. The patient left hospital immediately, and I did not see him again, but I have no doubt the cure proved a radical one.

COMMENTS.

Case 1. Two explanations of how the worm got to the place where it was found occur to my mind. The first is that a little abscess, tubercular or of some other nature formed behind the bowel (probably the ascending colon) and burst into its lumen. The round worm may then have passed through the aperture so made into the abscess cavity. Its presence there would probably set up irritation and inflammation and would tend to make the abscess extend, which it did till it pointed in the lumbar region. Probably the opening by which the abscess communicated with the bowel was small and it may have got plugged with blood clot or something and only become patent occasionally when the pressure of the contents of the abscess forced out the plug, giving the patient temporary relief and causing bloody fluid to appear in the stools.

The other explanation which occurs to my mind is that there was originally an ulcer in the bowel (tubercular or of other nature). This became adherent to the posterior parietes and then perforated, causing an

abscess in the cellular tissue at the spot. Through the opening in the base of the ulcer, the round worm might pass. The rest of the story would be much the same in either case.

Case 2. In this case it is difficult to say how the leech gained access to the nasal passage. The patient, however, told us that he was engaged in the camphor business. He lived a great deal in the forests of Formosa and he often stooped down and drank water like a horse out of pools or streams when he was thirsty. It seems likely that it was when he was so engaged that the leech found access.

MISSIONARY MEDICAL SCHOOLS.

The following is a portion of an address entitled, "Curative Christianity," delivered by Dr. Stephen Smith before the graduating class of the American Medical Missionary College, June 21, 1904:

MEDICAL MISSIONARY SCHOOLS.

The school in which the medical missionary is to receive his professional education deserves more consideration than it has hitherto received. In these latter days science is the handmaid of God, and she is jealous for her prerogatives. During her reign no physician has been made by a direct endowment with power from on high. On the contrary, she has exacted and still more rigidly exacts, from her votaries, patient, persistent study, under trained teachers, and for long periods, in organized schools devoted to science. We can better appreciate the question now raised by briefly tracing the history of the efforts that have been made to secure the proper training of medical missionaries.

The initiative in this effort to place the medical art in its right relations with missionary enterprises was taken by that veteran pioneer, Dr. Peter Parker, an American medical missionary to China. On his return to this country, in 1841, he visited Dr. Abercrombie, one of the most eminent physicians of the medical school of Edinburgh, Scotland, and informed him of the vast importance to the cause of foreign missions of training medical men for the service. Dr. Abercrombie was so much impressed by the statement that he called a meeting for the discussion of the subject. That meeting resulted in the formation of a society devoted to the specific purpose of sending medical aid to missionary

fields. Dr. Abercrombie became president of the society, and among its members we find the names of Dr. Chalmers, Professor Syme, and others of equal rank. For upward of sixty years that society has been engaged in training medical missionaries and sending them forth, and these physicians have taken rank with the ablest graduates of the famous Edinburgh school.

London followed the example of Edinburgh and established its societies for the training of medical students to become missionaries, and the success of these trained medical students has been marvelous.

On arriving at New York, Dr. Parker made a similar appeal to the prominent physicians of that city, and the response was most cordial. A large society was formed, and for several years medical aid was freely contributed to the missionary bodies. This society did not train medical students for missionary work, but it secured from the only medical college then in New York a rebate of the fees for students intending to become missionaries. This society finally lapsed, and no further organized effort was made in this country to aid medical missionaries until the International Medical Missionary Society was projected by Dr. George D. Dowkonnt. This society began its work along the same lines as the Edinburgh and London societies; that is, by aiding and training intending medical missionary students. For several years the medical schools of the city co-operated with the society by reducing the fees, and its success was such that it had upward of fifty students in training at one session. At length the schools determined to have no beneficiaries, and refused longer to favor the students of the society. To meet this emergency, the society proposed to create scholarships, and one school accepted the proposition. When these scholarships expired, this school refused to renew them, and thus threw upon the society the entire pecuniary burden of supporting those students who were unable to pay their expenses. Under these conditions the question of organizing an independent medical college devoted exclusively to the education of medical missionaries was raised. The proposition was received with great favor on every hand, except by the medical schools, which unitedly defeated the efforts made to secure a charter.

ADVANTAGES OF SEPARATE SCHOOLS.

The arguments which were then so potent in favor of a separate and properly organized and endowed missionary medical college are more convincing to-day and in the presence of this class of graduates

than they were at that time. It will be appropriate to this occasion to recall and emphasize some of these arguments. It is true that the technical teaching of the medical sciences is nearly the same in the various schools, and a thoroughly practical education can be obtained by a well-qualified studeut in any of the large number scattered throughout the States. But we must not overlook the fact that the future professional rank and standing of the studeuts is influenced by the particular school which he attends and from which he is graduated. The school impresses its own reputation indelibly upon his professional character. A diploma from certain medical colleges is a passport to almost certain success. In like manner the influence of the association of students with one another and with the teachers tends powerfully to form the future habits of thought and action of the students. Hence, it is a questiou of the first importance in the education of persons for any giveu employment or profession that they attend the school which has the highest ideals of the service which the student is about to enter and the largest facilities for teachiug its special technical and practical branches. Iu such a school the very atmosphere is surcharged with the spiritual life of the scieuces taught, and the student is coustantly inspired to high endeavor for excellence iu all of his studies by daily association with sympathetic classmates striving to achieve the same success. This fact alone would justify the establishment of medical colleges devoted to the educatiou of intending medical missionaries.

But there are other considerations quite as important. The missionary medical student should have a wider rauge of studies than the curriculum of the ordiuary medical school provides. Climatology, epidemiology, pharmacology, mineralogy, are important accessory sciences which he should learn. To these may be added the minute study of foods and their preparation, such domestic arts as relate to persoual hygieue, and potentiality and uses of natural remedies, as water, heat, electricity. He should be practically skilled in every department of laboratory work, such as chemistry, biology, bacteriology, pathology, aud physiology.

Many of these subjects may seem trivial and uuimportant, but when it is considered that the medical missiouary is to practice his profession far removed from those aids which surrouud the physician in civilized communities, it is apparent that every condition of education which multiplies his resources adds greatly to his usefulness. Hippocrates wisely commended to the graduates of the school of Cos the study of the whole circle of the physical sciences.

Another important result from this training in a special school is the opportunity that is offered the faculty to study the peculiarities of each member of the class, and thus be able to furnish missionary societies with accurate information in regard to candidates applying for appointment. The New York Institute was in constant communication with the secretaries of the different missionary bodies, and enabled the societies to make judicious selections of medical graduates for their various fields of service. In some instances the appointments were made without consulting the managers of the Institute, and serious consequences followed. The school, therefore, becomes a most important aid to missionary organizations in the selection of their missionaries.

Another advantage of the medical missionary college has been found in the association during student life of persons from the different religious denominations in attendance, and the cordial relations which spring up among them while preparing for the performance of the same future duties. The fellowship and brotherhood thus established during the susceptible period of student life remains a permanent bond of union between persons of a common faith. The hundred or more medical graduates who during their pupilage were housed and taught, in part, by the International Medical Missionary Society, of New York, formed an association to maintain a constant correspondence with one another after they had gone to their separate fields. Thus, over one hundred missionary stations in all parts of the world have been brought into sympathetic relations, though the missionaries themselves belong to the different religious denominations.

THE AMERICAN MEDICAL MISSIONARY COLLEGE.

The arguments in favor of an independent medical missionary college, rightly situated, and properly organized and equipped for thorough work, can be greatly multiplied, but all combined cannot have the force and sufficiency of the living presence of the American Medical Missionary College, with its graduating class about to receive its diplomas, legal testimonials that the members of this class are duly qualified to practice the art of medicine. And my convictions of the value of such a college are greatly strengthened by a personal examination of its organization and management. It has been very emphatically and persistently alleged against such a medical school that it will lower the standard of medical education and become a resort of a class of students who are wholly unfit to enter upon the study of medicine. It is gratifying to find that these predictions have in no particular been

realized in this College. On the contrary, it has in many respects raised the standard of medical education, as compared with even our most advanced schools.

In the first place, the required educational qualification of the applicant for admission to the school is placed very high, but not too high, if due regard is had to the requirements of the missionary service. Certainly no unworthy and incompetent student can find access to the classes of this school if this standard is maintained. The preparatory studies for admission to the higher classes are exceptionally well chosen, and indicate that those who have passed a successful examination have attained to a high grade of scholarship.

Again, the method of teaching is altogether excellent. The teacher and student are brought into such close personal relations that they must necessarily understand each other. The art of teaching is acquired, not inborn ; a study, not a gift. Accurate knowledge is essential to the success of the teacher, but it alone does not insure success. John Hunter, the most scientific surgeon of the past three centuries, could not retain a class of students. He understood the subject, but he did not understand the student. The successful teacher must maintain a personal contact with his pupils so close and familiar that he is able to adapt his instructions to each. An experience of forty years in teaching medical students, long since convinced me that the recitation in small classes is the most successful method of meeting the wants of the individual student. Placed in these relations no student can escape the critical questions of the teacher, nor can the teacher escape the often tantalizing questions of the pupil. Bacon says : " He that questioneth much, learneth much." In the class-room both the instructor and the pupil have unlimited opportunities to ask questions, and as a result the inapt student is kept abreast of his class, while all profit by the questions and the explanations.

The modern student of medicine is to be congratulaed that the old-time lecture as a method of teaching is being superseded by the class recitations, the laboratories, the hospitals, and the clinics. The passing of the ancient professor, in evening dress, with well-conned manuscript from which he rarely raised his gold-rimmed spectacles, gives place to the instructor, clad in his dissecting-room and laboratory suit, whose hearty handshake of welcome assures the student that he is to be a co-laborer with his teacher in the fields of science.

But admirable as are the methods of teaching the more technical branches in this school, instruction in laboratory investigations of every kind which enter into a knowledge of the science and practice of

medicine, is conducted along lines best adapted to render that knowledge (at all times and under all conditions) available. The location of the College in Chicago and at Battle Creek gives the students extraordinary facilities for clinical and laboratory studies and work. In the large city, actual missionary duties are performed at the dispensaries and hospitals while the student is engaged in clinical studies; and this two-fold service teaches him practical lessons in organizing and managing such institutions in the mission field. At the Battle Creek Sanitarium the course of study in the investigation of disease, with the aid of numerous laboratories, the practical analysis and preparation of foods, the opportunities for observing and treating all forms of surgical operations under the most approved antiseptic conditions—all conspire to furnish the intending medical missionary student with ample means for perfecting himself as a practitioner of medicine and as a missionary in foreign lands.

A GREAT FUTURE.

The American Medical Missionary College has before it a future of great possibilities. Standing alone as the pioneer institution devoted exclusively to the training of those who have been chosen to go "before His face into every city and place whither he himself would come," it inaugurates a new era in the efforts to evangelize the world. It is an answer to the pathetic appeal of the Master to his disciples, "Pray ye . . . the Lord of the harvest, that he would send forth laborers into his harvest." There is but one condition wanting to enable it to fulfil its great mission worthily and completely. It should have the sympathy, confidence, and support of all the Protestant denominations engaged in missionary work, and should become their medium of securing competent medical missionaries. By this means, endowments may be secured and the college placed on an independent and enduring basis.

Carlyle says: "The power to relieve human pain is a divine gift." How much greater is the gift which this diploma confers in endowing its recipient with power to cure all manner of diseases! But the diploma of the American Medical Missionary College has a higher significance and a nobler purpose than relieving the ills of the body. It endues these graduates with a mission which far transcends in its scope and character that of any other educational institution. That mission is clearly and forcibly expressed in the command of the Master, "Cure the sick, and tell them the Kingdom of God is at your door."

HYMN TO BE SUNG AT THE OPENING OF A NEW HOSPITAL.

"Accept this building, gracious Lord,
No temple though it be;
We raised it for our suffering kin,
And so, Good Lord, for Thee.

Accept our little gift, and give
To all who here may dwell,
The will and power to do their work,
Or bear their sorrows well.

From Thee all skill and science flow;
All pity, care and love,
All calm and courage, faith and hope,
Oh! pour them from above.

And part them, Lord, to each and all,
As each and all shall need,
To rise like incense, each to Thee,
In noble thought and deed.

And hasten, Lord, that perfect day,
When pain and death shall cease;
And Thy just rule shall fill the earth
With health, and light, and peace.

When ever blue the sky shall gleam,
And ever green the sod;
And man's rude work deface no more
The Paradise of God."

CHARLES KINGSLEY.

A NEW HOSPITAL IN CENTRAL CHINA.

THE HOSPITAL OF THE AMERICAN BAPTIST MISSION AT HANYANG FORMALLY OPENED.

While the work of medical missions in China is by no means new, the opening of a hospital arranged and equipped according to the best methods of medical science is an event of significance not only in the history of Missions, but also in the development of China. Such a building has been erected by the American Baptist Mission to care for

the quarter of a million or more people who live in Hanyang. As frequently happens in China, the site for the building was only secured after long and continued effort to overcome opposition and prejudice. Success at last crowned the efforts and an adequate plot of ground was secured in the centre of the Hanyang valley, a place about equidistant from the main sections of the city.

The plant at present cousists of two buildings—the hospital proper and the dispensary—in which is incorporated the chapel. The hospital itself is a handsome building, rectangular in shape, three stories high. There are four main wards, splendidly lighted and ventilated. On the second floor there is a small ward enclosed in glass, adapted for a few consumptive patients. On the third floor, at either end of the building, are rooms which can be shut off entirely from the rest of the building, and are therefore suitable for contagious diseases. A feature of this hospital that is something of au innovation is the provision made for foreign patients in small private rooms. As the number of foreigners iu this important centre increases, it is felt that there will he a demand for hospital accommodation, at least in surgical cases. The operation room, finished eutirely in white enamel, contaius every appliance needed for successful surgical work. The kitchens and servants' quarters are located in a separate building in the rear.

The formal opening of the hospital, which occurred on Tuesday afternoon, March 12th, was appropriate and impressive. Although the weather was threatening, a large number of people came in steam launches and sampans from Hankow and Wuchang. The Dedication Service took place in the Hospital Chapel, and was in charge of Rev. J. S. Adams, the senior member of the Missiou. The address was in Chinese, and was given by Rev. Arnold Foster, B.A., of the London Missionary Society in Wuchang. The prayer of dedication was made by Dr. S. R. Hodge, of the Wesleyan Mission in Hankow. After the Benediction hy the Chairman, the service was transferred to the hospital steps, where the Hon. William Martin, U. S. Consul-General, and the Hon. E. H. Fraser, H. B. M. Consul, made appropriate speeches. The building was then formally opened by Mrs. E. H. Fraser, after which those present inspected the different rooms and partook of light refreshments.

One of the notable featnres of the occasion was the attendance of all the leading Mandarins of Hanyang and the vicinity. Many of these had previously contributed to the erection of the building and had shown a lively interest in the work done. There is at least one kind of Mission work in which official China believes.

THE PREVALENCE OF INTESTINAL PARASITES IN KIANGSU PROVINCE, CHINA.*

By GEORGE M. OLSON, M.D.

Assistant Surgeon, United States Navy.

"Although it is commonly known that intestinal parasites are very prevalent in China, but little definite statistical work has been done, and so far as can be ascertained none in this province of Kiangsu. China, considered medically, is rather an indefinite term with its great extent of territory and its hundreds of millions of people. The eighteen provinces vary in many important essentials as: 1. Climate; from the arctic cold of the northern to the tropical heat of the southern. 2. Elevation; from the plains and level provinces to the mountainous. 3. Density of population; from thirty to a square mile to 600. 4. Amount of rainfall. Therefore it is quite probable that the prevalence of intestinal parasites in one province will be quite different from that in another.

The present series of examinations of stools of Chinese was made at the laboratory of St. Luke's Hospital, Shanghai, through the kindness of Dr. W. H. Jefferys. The stools of all the patients in the hospital were examined without regard to symptoms presented, and, as they were of the lower class, the majority of the Chinese in this province probably show the same percentage and kind of infection.

Kiangsu province has an area of 36,000 square miles, with a population of 25,000,000, or 568 to the square mile, with one exception the most densely populated province in China. It consists of low-lying land extremely well watered, with rivers, including the great Yang Tse, lakes and the grand canal. The climate is hot in summer, cool in the fall and an occasional light snow in the winter. There are many cases of malaria and filariasis. It resembles many of the provinces near it, but further inland the country becomes more mountainous.

With the above conditions, the absence of sewerage systems, and the unclean habits of the people, one would expect to find many cases of intestinal parasites as well as of other diseases caused by unhygienic surroundings. The practice of spreading night soil over vegetables, strawberries, etc., is perhaps one of the most prolific sources of infection. Water probably plays a less important rôle, as the natives rarely drink anything but hot tea or hot water. The Chinese believe that cold water is unwholesome, indicating that the Chinaman has learned through experience what the doctor has learned through science. In the large foreign settlement cities as Shanghai, the local boards of health have spent considerable effort in instructiug the Chinese in simple hygienic measures.

In all, during the months of October and November, 1906, fifty stools were examined. It was the original intention to secure one or two hundred, but even the fifty were obtained with some difficulty, as the Chinese are rather loath to contribute to such a little understood process as fecal examiuation. The patients in St. Luke's Hospital are nearly all adult males, with ailments or injuries from fractured limbs to beriberi. The stools were examined in the usual way, all with the high power. Following are the results in tabulated form:—

TABLE. 1.

Percentage of infection.	No. of stools.	Per cent.
Examined	50	...
Showing infection with one or more intestinal parasites	30	60
Showing infection with *Ascaris lumbricoides*... ...	26	52
Showing infection with *Tricocephalus dispar*... ...	9	18
Showing infection with *Uncinaria duodenalis* ...	2	4
Showing infection with *Oxyuris vermicularis* ...	1	2

* Reprinted from the *Journal of the American Medicine Association* of March 2nd, 1907.

TABLE 2.

Cases of Double Infection.	No. of stools.
Showing double infection	8
Showing infection with *Ascaris* and *Tricocephalus*...	5
Showing infection with *Ascaris* and *Oxyuris*	1
Showing infection with *Ascaris* and *Uncinaria*	1
Showing infection with *Uncinaria* and *Tricocephalus*	1

TABLE 3.

Relative Frequency of Parasites Found.	No. of parasites.	Per cent.
Ascaris lumbricoides among the infected stools	26	86+
Tricocephalus dispar among the infected stools	9	29+
Uncinaria duodenalis among the infected stools	2	6+
Oxyuris vermicularis among the infected stools.	1	3+

The sum of the percentages in Table 3 comes to over 100, but it must he remembered that many of the cases were double iufections.

The above tables would indicate that sixty per cent. of the population of Kiangsu province are infected with intestinal parasites, and this figure is probahly under rather than over the true estimate, as it is possible that some stools with very few ova were overlooked. Some of the stools, for iustance, would show only one ovum of the *Ascaris lumbricoides* in a slide, while others would show large numhers of ova to every field. Then, too, it may he possible that if only one or two worms were present the discharge of ova might be intermittent, and thus the presence of parasites he overlooked with only one examination. *Ascaris* seems to be by far the most common parasite, with the *Tricocephalus* next. The ova of the *Ascaris lumbricoides* varied greatly in size, shape and color; a number of the long oval shape that have been described* as probahly helouging to a new species of *Ascaris* were seen.

Two cases of infection with *Uncinaria duodenalis* are noted, or four per cent. of the stools examined. Both showed hut a few ova, two or three to a slide, aud after treatment with thymol search for the parasites was made without success.

One case of *Oxyuris vermicularis* was noted. J. Ch. Huber* states that he has never discovered the ova of this parasite in fecal material taken from the rectum, and that microscopic examination of the dejecta is of little diagnostic value. O. Leichtenstern† and Lutz† have also failed to discover the ova of *Oxyuris* in fecal examination. On the other hand, v. Jackson says he has almost always found them in the feces.

No ova of the tapeworms were found. The Chinese eat but very little beef, and that well cooked, explaining the absence of *Tenia saginata*. A great deal of pork is eaten, hut thoroughly cooked, so *Tenia solium* also is apparently uncommon.

Of the unicellular intestinal parasites but one was noted, the *Trichomonas intestinalis*. Some of the stools, however, were examined after standing for some time, so it is possihle some were overlooked in this way. Dysentery and abscess of the liver are not uncommon here; duriug 1905 there were three deaths from abscess of the liver among the foreign resident population of about 12,000. No statistics of its prevalence among the Chinese are available. Neither the *Entamœba coli* nor the *Entamœba histolytica* was found in any of the fifty stools examined."

* O. T. Logan: The *China Medical Missionary Journal*, September, 1906.
† Twentieth Century Practice of Medicine, viii., 1896 Ed.

MOUKDEN DISPENSARY AND PART OF THE MOUKDEN HOSPITAL BEHIND.

The China Medical Journal.

VOL. XXI. MAY, 1907. NO. 3.

Editorial

THE EDITORS' REPORT.*

As the majority of those present know and to their cost, the Editor has been for six months past working on a study of the Nosogeography of China, with the intention of presenting the result as his contribution to the papers of this Conference. But in the eloquent words of the Missouri farmer, "He bit off more than he could chaw." At present his study drawers resemble so many well distended stomachs, thirty minutes after the ingestion of Christmas dinner; full of good things of many kinds but of still unproved usefulness. I calculate that with good health and better luck, I may hope to exhibit the digested pabulum not later than our meeting three years hence; meanwhile to continue to extract intellectual *pepsin* and *hydrochloric acid* from you my long-suffering friends. In a word, the subject proved too large and too important for the time I had allowed. Some day I hope to present to you this compilation of what is after all not my work but yours; and in some small way to make it represent the observations, not of one man, but of our body at large.

Let me instead, at this time, the end of my two terms of service as Editor of your JOURNAL, make a brief report to you on its condition and some suggestions which are the fruit of not a little thought not only on my part but on that of others by whom also the JOURNAL has been kept alive and fairly healthy since my connection therewith.

The JOURNAL has appeared as heretofore without interruption since the first issue of our service, January, 1903, and it has not at any time, through lack of material, been driven to publish two

*Read at the Conference, Shanghai, April 19th, 1907.

numbers under one cover, as was occasionally done in the middle ages. Three or four of our issues have, however, been so poor as to merely suggest the idea of journalism, and as Dr. Lincoln one time explained it, "We would not pad the JOURNAL, and as there was nothing else to put in it, we didn't put it in." The result was excessive emaciation, but convalescence was fairly rapid and uninterrupted. Other few issues have been interesting and fairly creditable and a couple of dozen contributions have been such as any medical journal would be glad to take the responsibility of. Since the January issue of 1905, the JOURNAL has, following the wishes of the Society, been published bi-monthly instead of tri-monthly, and I cannot say that there has been any particular difficulty in doing so, though I do feel that this is as far as we shall be able to go in frequency of appearance, so long as the editorship is unpaid and the Editor is one whose chief duties are other than editorial.

The relationships with the Presbyterian Mission Press are as satisfactory and continue as friendly and delightful as ever. The usual monthly event of seeing whether we or they can remember first to telephone the other to hurry up, goes on with the regularity and placidity of a grandfather clock or a chronic eczema. This month they telephoned first, but last time we remembered to telephone three times and so scored heavily. This is merely to introduce to you the remark that we are holding over the May 1st issue for a report of this Conference in order that absent members need not wait breathlessly for two months for the result of our deliberations. Our advertisements are decent in character and fair in number, and we have the satisfaction of believing what is not always true of Journals taking advertisements that, considering the fact that nearly the whole medical profession in China sees them and we are all hospital buyers, our advertisers get more for their money than we do; in other words that advertising in the JOURNAL is cheap and very profitable.

It has been the desire of the Editors to allow the JOURNAL to feel to a greater extent than in former times the personality of the Department Editors, who are of unusual ability and might any one of them edit the JOURNAL as well or better than it has been edited during the past four years. With this end in view we have

invited them and others from time to time to express themselves through signed editorials. This has proved a success, and if continued, will inevitably broaden our editorial standpoint. There are at least ten men in China whom I should like to see Editors of the JOURNAL, and I am ready to vote for all of them.

The following revision of the work of the Department Editors has been arranged for:—

Dr. Woodhull will take charge of Progress in Obstetrics and Gynaecology, and the Hygiene and Hydro-therapy will be discontinued.

Dr. J. P. Maxwell will create a new department of Diseases of Warm Climates.

Dr. J. L. Maxwell will continue Pathology and Bacteriology.

Dr. E. H. Hume has recently taken over Internal Medicine.

Surgery we hope to arrange for at this time before we disband, and it is in our mind to see what may be done in the way of having a report prepared from time to time summing up the original work and advance in medical science that may be credited to men now working in China. This suggestion is the outcome of my own recent studies, which show that more is being done by far than the many modest letters I have received would lead me to believe is generally realized. At any rate it would be worth an attempt at compilation as a stimulus to more work if for nothing else. It is an old custom, this matter of Department Editors, and the careful selection of such points in the advance of medicine in its various branches as bear specially on work in China is, I am told, appreciated by those who have little time for magazine reading, and, I may add, little money for it. So we do not see that we can do better than to continue this work, yet we do feel that we are ready and shall be glad to encourage any of the Department Editors in any special schemes they may suggest for enhancing the value and reach of their special departments. Indeed we shall welcome such signs of individual thought and enterprise as something to be distinctly appreciated and credited.

Before putting the cover on our editorial type-writer and so officially closing down business, and in all the blissful uncertainty as to whether or not we shall ever take it off again in your service,

I am prompted, in the quiet of my study, however it may be when I shall make this report to you, to open my heart on the general subject of the future of the CHINA MEDICAL MISSIONARY JOURNAL and lay before you the hopes and aspirations of one who has both of these. If I speak frankly please remember that it is merely an American trick. It is our custom to tack the list of our faults upon the front door of the Town Hall and not to tear down the paper till we have torn down the faults. When we once realize them, trust us to tell the whole world how bad they are and to use plenty of red paint in doing so. Frankly, then, I think the CHINA MEDICAL MISSIONARY JOURNAL is only a tolerably good medical journal and that it is still less of a missionary journal and that it was not intended to be the latter by its founders. That in has always been in fact really a Medical Journal, though a Medical Journal with a strong religious and emphatically Christian tone, and strongly and positively and actively pro-medical Missions. It was intended to he a scientific journal, not a missionary propaganda. It was for our own edification and as a means to the development of our profession, not for the enlightement of Sunday-schools and mother's meetings. In spite of considerable merit, however, it has not gained any degree of recognition in the scientific world, nor, as far as our subscription list would indicate, is it read by even one Sunday-school child, or hopeful mother; it is rarely quoted or referred to in professional journals, even including our exchanges, and never to my knowledge in parish bulletins. This is not, I truly believe, because it is not of interest to the former group, but because its name is such as would indicate to the average busy medical man or Editor a pseudo or hybrid character and misinform as to its actual function as a journal of scientific medicine published hy scientific men for the advancement of the science of medicine. I do not believe that the average physician outside of our association, seeing the cover of our JOURNAL, would have any notion of the real nature of the JOURNAL as it has been published since the first number appeared. I know that a concession doctor of many years' standing in Shanghai had never heard of it till I showed a copy to him this winter. Frankly, then, I believe and the suggestion was first made to me by one of our Hankow men, our JOURNAL is misnamed and has always been

seriously hampered by the fact. It seems a small thing and a superficial, but like the high silk hat on the Chinese mafoo, has to be tried on to make one realize the effect. It is only a question of degree between C. M. M. J. and China Dental Missionary Journal, or Japan Bacteriological Missionary Journal, or Chifu Horticultural Missionary Journal, or even Chang-teh Intestinal Parasitic Missionary Journal. Why not these as well as what we have? Personally I am convinced that our infant is suffering largely from the infelicity of her name, and I should be glad if you would decide to call her what all those who founded her constantly refer to her as, what she actually is and always has been—the *China Medical Journal* of the (or published by the) China Medical Missionary Association.* She is not a "Double Cross," nor a "Leaves of Healing," nor was she ever planned for any such home missionary encouragement idea. We might publish such a magazine and with very satisfactory results, but do not let us longer add incense to our *quinine* to the questionable advantage of either. If we wish to publish a missionary Journal let us do so by all means, but let us omit from it such immodest papers as those on Fæcal Fistula and allied themes of professional interest and the illustrations which are appropriate to them, but which we have indelicately published from time to time in our so called MISSIONARY JOURNAL. That there is a lurking attempt to dilute the religious tone of the JOURNAL is simply not true. This our issues, both editorially and otherwise, have regularly proved. Under the title of Z I have personally written one religious paper for every other one sent to the JOURNAL for years past. I would have the same JOURNAL we have always had, only grown stronger, and I feel myself that the religious influence of the JOURNAL under its right professional name will be farther reaching than it has ever been, by far, when our name tells the fact and not the fiction, but so long as medicine stands in the name, laymen will not read it, and so long as missionary stands physicians, outside our own small body, will not do so either. I clearly recognize that there may be a divided opinion on this matter, and though I earnestly desire this change to be made at this time, yet a discussion by the Association may suggest reasons against it which I do not now

* NOTE.—This action was unanimously taken by the Conference.

anticipate. It seems to me like one of those cases where it is wiser to be all things to all men, where the letter is standing in the way of the spirit, where fact and unobtrusive simplicity would win acceptance, while a spirit of exclusion provokes intolerance. There was a time when it was the part of wisdom to say one's prayers at the open window, and a brave man did it. But later on it was the part of greater wisdom to go into one's closet and shut the door and pray from the heart alone. And it seems to me that at this time the JOURNAL will have the greater power through the lesser ostentation.

I have already referred to my faith and hope for the JOURNAL. And I have also said that it is only a tolerably good sheet at present. Considering the brilliancy and positive professional distinction of many members of this Association, and the tremendous clinical experience of even the average, I think the JOURNAL at present a very weak contribution to our great profession. I believe that we could with some effort and our present membership put out a Journal that would be three to four times as good as it is to-day. I can say emphatically that the support of the JOURNAL is at least twice as good as it was four years ago. There was a time when every issue contained an editorial growl on support. This was given up, partly because it did no good and was tiresome, also because it revealed our nakedness to the public and weakened whatever influence we had, but lastly and chiefly because we are getting to a point where we do not need to growl for lack of material. Lately we have had satisfaction in observing that anxiety appeared when papers were not published for some issues after receipt. In this connection I might simply say that the Editors rarely refuse to print a healthy paper submitted by a member of the Association. Certain of our members are still sending their professional articles to other Journals, and, I may add, will probably continue to do so till we drop our hybrid name and get on a straight professional basis.

Now I propose that for twelve months from to-day we each and all pledge ourselves to each other that for this one year we shall publish a Medical Journal that will be a thing to look back on with pride for years to come. To put out six first class issues, bright and alive, of true scientific interest well illustrated with numerous photographs, with a pathological report from at least one of our

now ten or twelve little lahoratories in each issue. We have the fruit of this Conference, and the prospective fruit of the Kuling Conference, as a good start, and we have a larger membership than ever before. Let every member present guarantee to write regularly once or twice a year for the JOURNAL and to stir up those in his neighborhood to the same duty. Let us do this thing for just one year. Then we may go to sleep again if we wish, but I do not think the JOURNAL will go to sleep with us. Once make it a Journal worth writing for and it will he read, and if read, then it will always be worth writing for. Just once, gentlemen and for one year, a real effort, if we are to do what I ask, but if successful, the greatest step in the progress of scientific medicine in China, since the founding of the Journal in 1887. The Medical Journal still lives, and at the end of a second term we render you this simple report of our symptoms, our pains and our fevers, leaving you in consultation to prescribe for us the book shelf and eternal fame, or waste-paper-basket and the ash-heap.

A CHINESE EDITOR FOR THE ASSOCIATION.

The Publication Committee in 1905 entered into negotiations with Dr. Cousland, who was at that time at home on furlough in Edinburgh, in regard to becoming Chinese Editor of the Association on his return from Scotland, residing in Shanghai for that purpose. The object of the committee in trying to secure the services of Dr. Cousland was to provide a General Editor for its publications, to look after the printing of its hooks and to see that the terms used were uniform, to himself do translating work, besides acting as editor of a medical journal in Chinese, if such a publication should be started in the future. In answer to the request of the committee, which consists of nearly a dozen members from different parts of the empire, all of whom were enthusiastic in their support of the proposal, the Secretary of Dr. Cousland's Society, Rev. Wm. Dale, wrote as follows from London under date of July 25, 1906 :—

"Probably Dr. Cousland himself has already informed you that our Committee consents and with great cordiality to lend him to the China

Medical Missionary Association for some years to carry forward the all-important work of the Association.

We reckon it an honor to Dr. Cousland and to our Mission that he should be called upon to take charge, at any rate for some years, of this great enterprise, the unifying of Chinese medical terms and the translation of standard English medical works, and we are glad to put at the service of this enterprise one of our own best medical missionaries.

I hope you may be able to provide a house for Dr. Cousland in Shanghai and to undertake to meet the other expenses incident to his residence there. We quite understand that, on the other hand, we are responsible for his salary, while we hope for success in an appeal which is being made to those Missions which have medical work in China to assist us in meeting Dr. Cousland's salary, since the work he is to be busied about concerns all Medical Missions in China."

In answer to this cordial letter assenting to the committee's proposals, Dr. Cousland's Society was told that we hoped a way might be found to meet their wishes in regard to furnishing a house, etc., for Dr. Cousland in Shanghai, and this matter came up for discussion at the meeting of the Publication Committee held in Shanghai April 18th, 1907, and therefore took place before the opening meeting of Conference of the Association.

The work of the Publication Committee, during the two years since it was appointed, proved beyond a doubt the need of such a man on the spot to facilitate the passing of our books through the press and to see that the terms are uniform, besides being able to do a large amount of work on his own account in the way of preparing new translations.

Every one who knows Dr. Cousland and is acquainted with the quality of his work, knows that he is just the man for such a place, and is assured that he will be most painstaking in the performance of his duties. At the opening session of the Conference the Association wisely decided to stand by its Publication Committee and invited him to become its representative in the publishing line in Shanghai. Plans were suggested by the Publication Committee and adopted by the Association to meet the obligations involved in providing quarters for Dr. Cousland and in meeting the various incidental expenses, and from the cordial way in which the funds have been provided for the work of that committee so far, we feel assured that there will be little difficulty in meeting this new demand.

SUBSCRIPTIONS TO THE FUNDS OF THE PUBLICATION COMMITTEE OF THE C. M. M. A., 1906.

Per P. B. Cousland.

Sir Halliday Croom	£	2.	2. 0.
Dr. Donald MacAlister		1.	1. 0.
Prof. Alex. MacAlister		1.	0. 0.
Prof. McKendrick		1.	1. 0.
Dr. John Thomson		1.	1. 0.
Dr. B. Darling			5.
Mr. Walker			5.
Dr. P. A. Young		1.	0.
Lord Overtoun		2.	0.
Mrs. J. D. Munro		5.	0.
Dr. D. B. Lees		2.	0.
Dr. A. H. F. Barbour		25.	0.
Dr. Keppie Paterson		1.	1.
Sir Alex. R. Simpson		5.	0.
Dr. J. W. Ballantyne		5.	0.
Dr. J. Ritchie		2.	2.
Dr. R. J. Pye Smith		1.	0.
Mrs. Craven		5.	0.
Edinburgh Medical Missionary Society		25.	0.
Anto		1.	1.
	£	86.	19

The Treasurer would like to draw attention to By-law Seven in the revised *Constitution and By-laws* as adopted at this Conference and circulated with this number of the JOURNAL. It runs:— "Yearly dues shall be $4 Mex. in advance, including subscription for the JOURNAL and postage on the same."

Inasmuch as the dues include the JOURNAL it has been the practice for members to pay these dues directly to the Presbyterian Press and not to the Treasurer. Will new members please note this point and follow this practice.

The attention of old members is drawn to the increase in the dues from $3 to $4 per annum.

Will members please note that Article IV in the revised Constitution requires that proposals for membership be brought forward by two active members.

The Secretary's address is:—

Dr. P. B. COUSLAND,
2, Shantung Road, Shanghai.

CENTRAL CHINA MEDICAL MISSIONARY ASSOCIATION.

PROGRAMME 1907.

Date.	SUBJECT.	Meeting Place.
Feb. 27th	The possibilities of Scientific Research in Medical Mission work.....The President	Wu-Sen-Miao
March 13th	The Treatment of Tubercular joint disease Dr. P. P. McAll	Concession
,, 27th	Clinical Meeting	Wu-Chang
April 17th	What are the future possibilities of training Native Nurses in our Hospitals? Dr. E. M. Rowley	Han-Yang
May 1st	Clinical Meeting	Concession
,, 15th	Report of Shanghai Medical Missionary Conference	Wu-Chang
	OPEN MEETING.	
May 29th	Is Medical Itinerant work practicable and profitable? Discussion opened by Dr. A. Morley	Wu-Sen-Miao
June 12th	Clinical Meeting	Concession
	SUMMER RECESS.	
Oct. 2nd	Clinical Meeting	Han-Yang
,, 16th	Laboratory Work in Medical Missions Dr. C. Somerville	Concession
,, 30th	The Opsonic Index of the Blood Dr. J. G. Cormack	Wu-Chang
Nov. 13th	Clinical Meeting	Wu-Sen-Miao
,, 27th	Lantern Lecture.....Dr. Mc. Willie	Han-Yang
Dec. 11th	Clinical and Business Meeting	Concession

NOTICE.

As the Physiology requires reprinting, will those who have been using it kindly send to the undersigned any notes of errors or omissions they may have recorded. What is greatly desiderated is a copy with all obscure passages and errors marked. Such a copy will be carefully returned.

P. B. COUSLAND.

The Conference of April, 1907.

The Conference of the Medical Missionary Association of China, just ended, has been literally without a disappointment and in some respects has proved the most satisfactory in the history of the society. Even the veterans declare that this is so, and the fondest memories seem to evoke nothing from the dim recesses of the past that is better than the accomplishment of the past five days.

The fact is that the methods of mission work have reached such a high degree of development that the procedures of the present day are marked by a spirit of understanding, by a grasp of the conditions, by a willingness to co-operate, such as drives business to completion. For lack of mutual distrust, for willingness to get to the point, for all round get-there-edness we remember few assemblages of the size with anything approaching the easy mobility.

The following is the roll call of the combined sessions :—

MEMBERS PRESENT AT THE CONFERENCE.

Dr. D. D. Main, Hangchow.
,, W. F. Seymour, Tengcheofu.
,, (Mrs.) J. G. Meadows.
,, Adrian S. Taylor, Yangchow.
,, Fred J. Tooker, Siangtan.
,, Mary F. Tooker, Siangtan.
,, Carr, Kaifengfu.
,, F. W. Goddard, Shaohsing.
,, H. W. Boone, Shanghai.
,, Jas. Butchart, Lucheofu.
,, Thomas Gillison, Hankow.
,, E. H. Hart, Wuhu.
,, W. E. Plummer, Wenchow.
,, E. H. Hume, Changsha.
,, Geo. A. Stuart, Nanking.
,, J. L. Maxwell, Tainan, Formosa.
,, H. M. Churchill, Kienning.
,, Andrew Young, Mrs. Young, } Hsianfu.
,, O. R. Avison, Seoul, Korea.
,, Hugh H. Weir, Chemulpo, Korea.
,, T. H. Daniel.
,, P. L. McAll, Hankow.
,, Tucker, Shanghai.
,, Agnes M. Edmonds, Chungking.
,, J. G. Meadows, Wuchow.
,, James Menzies, Hwaichingfu.
,, R. T. Shields, Dongshang.
,, Lucy H. Hoag, Chingkiang.
,, Shackleton.
,, F. De Vol, Luho.

Dr. A. J. Hamilton, Shanghai.
,, R. C. Beebe, Nanking.
,, P. B. Cousland, Shanghai.
,, Sidney R. Hodge, Hankow.
,, W. H. Park, Soochow.
,, Christie, Moukden.
,, John MacWillie, Wuchang.
,, O. L. Kilborn.
,, R. Gifford Kilborne.
,, J. R. Wilkinson, Soochow.
,, W. H. Venable, Kashing.
,, Hunter Wells.
,, Thos. Cochrane.
,, Wm. H. Jefferys, Shanghai.
,, C. M. Lee, Wusueh.
,, Chas. C. Selden, Canton.
,, R. B. Gotteberg, Changsha.
,, A. M. Myers, Shanghai.
,, E. C. Machle.
,, John M. Swan, Canton.
,, Ethel N. Tribe, Amoy.
,, H. T. Whitney, Foochow.
,, Day, Shanghai.
,, Francis F. Cattell, Soochow.
,, David T. Stuart, Soochow.
,, R. E. Worley, Swatow.
,, Grant, Ningpo.
,, May Carlton, Nuchuan.
,, Ida Scudder, India.
,, Stephen C. Lewis, Chincheo.
,, A. D. Sibree, Hongkong.
,, Macklin, Nanking.
,, Rosa W. Palmborg, Shanghai.

Prof. Sir Alexander Russell Simpson, Edinburgh.
Dr. Rosetta S. Hall.
,, Alfred Hogg, Chefoo.
,, Margaret H. Polk.
,, Edwin A. Layton, Nantungchou
,, J. C. Davenport, Shanghai.
,, Mary Newell, Shanghai.
Dr. Anna Henry, Chentu.
,, Isabella L. Mack, Canton.
,, J. Sjoquist, Hsiangyung.
,, Taylor, Nuchuan.
,, Jean J. Dow, Changtehfu.
,, Evans, Yangchow.
,, E. L. Woodward, Anching.
,, J. P. Maxwell, Amoy.
,, Reifsnyder, Shanghai.

Eighty members were present at the Conference.

Besides the presentment of a series of papers unsurpassed for interest by any past Conference and a number of very worth-while discussions thereon, the more prominent actions of the Conference were as follows:—

1. The change of the name of the Journal to "THE CHINA MEDICAL JOURNAL," published by the Medical Missionary Association of China.

2. The election of a large number of new applicants to membership.

3. The ratification of the work of the Publication Committee, especially in securing the services of Dr. Cousland as Chinese Editorial Secretary and the provision of funds for his work.

4. The appointment of a permanent committee on the centralization of original research work, to provide subjects, methods and referees.

5. The appointment of a committee on Constitutional revission and the adoption of a revised Constitution.

6. The appointment of a committee on formulating a manual of health and advice to missionaries coming to the East.

7. The adoption of resolutions defining the Association's views on opium and alcohol evils and their regulation.

Time and space prevent reference at this time to these matters other than as set forth in the minutes of the sessions, but we shall hope to comment on some of them in the near future. It is enough now to say that we are happy and hopeful. Indeed the unanimity of opinion and the broad spirit of action was of the kind that warms the heart and cannot fail of approval.

ORDER OF THE MEDICAL MISSIONARY CONFERENCE,

April 19, 20, 22, 23.

IN UPPER HALL UNION CHURCH BUILDINGS.

Friday, 19th April.—Business Session.

9.30 to 10.00 a.m.—Devotional.

10.00 a.m.—Election of Conference Secretaries, etc.
President's Address.
Editor's Report.
Secretary and Treasurer's Report.
Reports of Committees.
Election of Officers for 1907-8-9.

2.00 p.m.—Business continued.

3.00 p.m.—Paper by Dr. J. L. Maxwell.
Subject—"Is the Association fulfilling its object as a Scientific Society?"
Discussion.

Saturday, 20th April.—Surgical Session.

9.30 to 10.00 a.m.—Devotional. Reading of Minutes.

10.00 a.m.—Paper by Dr. Hart.
Subject—"Aseptic and Antiseptic Surgery as applied to our conditions in China."
Discussion.

10.30 a.m.—Paper by Dr. Plummer.
Subject—"Necrosis."
Discussion.

11.00 a.m.—Open talk on New Instruments, Apparatus, Treatment, etc.

11.30 a.m.—Paper by Dr. Woodward.
Subject—"Mission Hospital and Dispensary construction in China."
Discussion.

2.00 p.m.—Paper by Dr. Hodge.
Subject—"Manifestatious of Syphillis in China."
Discussion.

3.00 p.m.—Paper by Dr. Neil Macleod.
Subject—"Two abdominal cases."
Discussion.

Sunday.—Medical Mission Sermons 6 p.m. at the various Churches.

Monday, 22nd April.—Medical Session.

9.30 to 10.00 a.m.—Devotional. Minutes.

10.00 a.m.—Paper by Dr. MacCartney.
Subject—"Fevers of West China."
Discussion.

11.00 a.m.—Open talk on new drugs, new treatment, etc.

11.30 a.m.—Paper by Dr. Wilson.
Subject—"The use of native Drugs," with illustrations.
Discussion.

2.00 p.m.—Paper by Dr. Boone.
Subject—"Cyclic Vomiting."
Discussion.

3.00 p.m.—Paper by Dr. Logan.
Subject—"Some problems in sub-tropical medicine, with special reference to the use of the microscope."
Discussion and specimens.

Tuesday, 23rd April.

9.30 to 10.00 a.m.—Devotional. Minutes.

10.00 a.m.—Paper by Dr. Beebe.
Subject—"The Evangelistic side of Medical Missions."
Discussion.

11.00 a.m.—Paper by Dr. Otte.
Subject—"Effect of Opium on Malaria."
Discussion.

2.00 p.m.—Paper by Dr. Agnes Stewart.
Subject—"Gynæcological practice in Central China."
Discussion.

3.00 p.m.—

5.00 to 7.00 p.m.—Reception by Dr. and Mrs. Boone, 4 Minghong Road.

THE CHINA MEDICAL MISSIONARY ASSOCIATION.

Address delivered by the Retiring President, Dr. CHRISTIE, at the Triennial Meeting, 1907.

It is my pleasing duty to give the members of "The China Medical Missionary Association" a very hearty welcome to this Conference.

Among the many changes that are now taking place in China none is more important than that which lessens the size of this great land. Distances, which a few years ago took weeks to travel, can now be covered in so many days. This remarkable shrinkage of the country will, I feel sure, make a great difference in the attendance at our meetings. We are steadily brought closer to each other for mutual help and fellowship, and this will tell on our work in days to come.

I gladly welcome not a few new members to our ranks since our last meeting in 1905. But we have to mourn the loss of some true and

OPENING OF THE MOUKDEN HOSPITAL.

honoured workers, who have gone to their rest and reward :—Dr. Macdonald, Dr. Arthur Peill, and others, tried and faithful missionaries, who did noble service in the cause of Christ in this land.

I am sorry that for several reasons I have not been able to prepare an address at all worthy of this occasion. I fully expected that the honour of addressing you would fall to the President Elect, and when it was otherwise arranged, I was already in the midst of preparations for opening a large new hospital, and some of you well know how much hard work and worry this entails, both before and after the opening day.

I have experienced another, and, in one sense, a more serious difficulty. In the paper prepared for the General Conference I have said my say pretty fully, and I do not wish to go over the same ground again. One effect, however, of the preparation of that paper, and the correspondence connected with it has been to impress very deeply on my own mind the enormous amount of work that is being done in our hospitals, with all the ramifications of effort radiating out from them all over China.

I should like to strike the key note of our meetings as one of praise to Almighty God for calling us to this work and for what He has enabled us to do for Him. I say this with no feeling of self-satisfaction. We are each and all conscious of mistakes and failings. We are fully alive to the imperfections of our best service, but the past is past, and the only use we can make of its experience is to rise on its errors, as well as on its successes, as on stepping-stones to higher and purer effort.

And this leads me to the main subject on which I wish to say a few words to-day, namely,

HOW TO MAINTAIN A HIGH SPIRITUAL STANDARD IN OUR MEDICAL MISSION WORK.

We all wish our hospitals to be centres from which the Divine light will radiate far into the darkness around us. How is this light to be kept bright ? I am sure we all feel that this is the vital point in our work. It is very important that we should help each other at this Conference by discussing details of professional work and comparing notes as to the practical *arrangements* in our hospitals and dispensaries and the evangelistic mechanism by which we endeavour to gather our patients into the Master's fold. These and many other subjects may with profit be discussed. But above them all and inspiring them all with a greater weight and importance than they could otherwise have, is the glad consciousness that our whole work, to its most trifling detail, is God's work, a step in the Divine ladder by which mankind shall rise to God. We believe this, we know it, but how are we to live up to it ? How are our hospitals to live up to it ?

Now I do not intend to try to answer these questions, nor to preach a sermon on the subject. I only want at the beginning of our Conference to remind you of its importance and to make a few suggestions.

And first may I say that the hospital, and the work done in it, and the Chinese assistants in it are not likely to rise to a higher spiritual level than that on which we ourselves stand. I speak from personal experience when I say that there is a grave danger lest we become

absorbed in our professional work, which is so full of interest to us, and rightly so, absorbed in the mere mechanism of our work and unconsciously allow our own spiritual life to sink low. We are apt to assume that we stand where we once stood and to be unconscious that the flow of grace has slackened within us. All I shall say is that it seems to me imperative for us medical missionaries to keep very close to our Master if we are to be of any use to Him, if we are to represent Him before men; and it is only when we ourselves are advancing that we can draw others after us.

The next important point is our *Chinese Assistants*, and here my thoughts naturally fall into three divisions :—

(1). How to engage them.

(2). How to train them.

(3). and most difficult—How to keep them; and the deeper question, how to maintain in them a high spiritual level runs through all three.

We have all experienced difficulty in securing men of the exact type that we want to train as helpers in our hospitals. We must always be willing to take something less than the best, but it is well on the one hand to have one *ideal* before us, and on the other to have our minds made up as to the minimum qualifications we can accept in a man.

He must have a good previous *education*, some acquaintance with the literature of his own country, and if possible, something of Western knowledge, especially arithmetic, history and geography, and of course a knowledge of the Bible. The brighter and cleverer he is the better, for we all know what a difference it makes when a man grasps our meaning quickly and can readily absorb our teaching. But unfortunately cleverness of this kind is too often combined with faults, which more than counterbalance it.

Character is of still more importance than brains. We want strong men, clean-handed, and of good report. We shall, in the long run, find cleverness and smartness but poor substitutes for trustworthiness. We should have satisfactory evidence as to the motives which actuate those who apply to us, and we should have surely for each one in regular Chinese form a genuine surety, not merely a name.

We must then, to some extent, have *brains*, and we must have *character*, but, most of all, we must have an *openness* for *spiritual development*.

It is very important that all should be Christians, but I would make no hard and fast rule as to church membership. If the choice lies between two, all other things being equal, I would certainly choose the one who is a member. I would specially welcome the sons of Christians, for we should expect to find better material in the second generation. I would not close the door against young men who are enquirers if their character is good and their sympathies are with us. Contact with Christ's work will draw out what is best in them and may lead them to a higher and fuller life. The second point is

HOW ARE WE TO TRAIN MEN ?

We all rejoice over the interest that is now taken in medical education in the establishment of thoroughly equipped medical schools in China. There is a great work before these. I hope no one will mis-

understand me, or accuse me of disloyalty to the large central medical colleges which I heartily support when I say that they cannot meet all our requiremeuts. The meu that these colleges will turn out will be of very high value in the market. I question if any of our hospitals will be ahle to employ more than one or two of such men. But every hospital needs junior assistants and dispensers. An ordinary sized hospital will require seven or eight, besides nurses or maid attendants. How are these to be trained ?

It seems to me that the best way would be for groups of neighbouring hospitals to nuite in this work. During the quiet seasou, when patients are not so numerous, men could be brought together for courses of lectures delivered by medical missionaries from these various hospitals. Bihle trainiug should be comhined with the teaching of the varions branches of medicine and surgery, and all students should realize from the first day they join us that they are being trained for the work of medical evangelists.

It is of the greatest importance that these students should not leave us till their training is complete. We have all had our disappointments over men going away after a few months or years and setting themselves up as full-fledged doctors of Western medicine. Some of them do good, hut the majority do harm, and all who have the interests of medical science at heart should do their hest to discourage them.

But a more important question we have to face to-day is this, when our assistants have received their training, whether at central colleges or otherwise: *How are we to keep them?*

The changes which are now taking place in China make the question difficult to answer, for the demand for those with the knowledge of Western medicine and surgery is great and daily increasing. The confidence of the people in our methods of treatment is pretty well estahlished, and a Chiuaman who has been in one of our hospitals, even if his knowledge is meagre, can soon gather round him a lucrative practice. Goverument appointments are opening up, and those who qualify at our medical schools can command large salaries. Now I do not think that we should grieve over our men occupying positions of influence, either as medical practitioners, or as government officers. I helieve that planting such Christian men in these positions is real missiou work, which will bear rich fruit in days to come.

But we *must* have trained men in our hospitals. If seems to me that there are *three* different motives which may iuduce men to remain with us :—

I. Devotion to God's Service.

II. A Large *Salary*.

III. What I may call *the family or personal tie*.

Of course the most important thing is to impress on our assistants the fact that they are not serving man but God, and that their greatest reward comes from Him, that they must be williug to live in a more humble way than they might do for the sake of helping their fellow-men and leading them to a knowledge of Christ. Through all their training this should be kept hefore them as their highest aim and best reward. And just as in Christian lands men aud women give up home and comfort and bright prospects for the sake of the great cause, so I believe many of our Chinese Christian youth will he ready to renounce worldly prosperity in order to glorify God in the work of healing and saving

men. The mercenary spirit should, if possible, be banished from among us, but, at the same time, we must not expect too great a sacrifice.

I consider that the salaries given in some of our hospitals to senior assistants are ridiculously inadequate, and we should face the fact that we must pay our men sufficient to enable them to live and support their families in comfort and in something like the rank to which their medical knowledge entitles them. I do not, of course, advocate paying them as much as they could make in government employ or in private practice. These it is impossible and undesirable to compete with. and we may expect that, do what we can, there will be some who will leave us for the sake of money.

It seems to me too much to ask of any man, who has knowledge and skill, which he knows could bring him a large income to keep his family in real poverty, little above the station of a coolie. It leads him into a temptation to which I fear some have succumbed, of secretly practising and accepting fees, or taking presents, or helping himself to drugs which he can sell. Let us put our assistants in the position desired by *Agur* and give them "neither poverty nor riches."

Now I believe that even when men are actuated by the highest missionary spirit and have a fair living wage something more is needed to bind them permanently to us, and this is what may be called the *family tie*, which includes the *personal tie*.

According to Chinese custom and feeling the members of one home stand by one another loyally in spite of minor private troubles and own the guidance and authority of the head of the home. The same loyalty should be called into play in our hospitals. Each employee should be made to realize his responsibility in this home, that its reputation and his own are inextricably bound together, that its welfare is his pride, its popularity his glory. There should be personal affection and confidence between the missionary and his helpers; there should be sympathy and mutual forbearance, while, at the same time, discipline must be maintained.

I shall not enlarge on this point, but should like to refer you to an article in our MEDICAL MISSIONARY JOURNAL of April, 1904. It is entitled "Hospital Discipline in Mission Work," by Z. I do not know who wrote that article, but I should like to have an opportunity of thanking him for it. In that paper sound principles are laid down for maintaining discipline in our hospitals and as to the spirit the missionary should cultivate towards the Chinese.

Every Chinaman recognizes the sacred and honourable tie between teacher and pupil. We should seek to have this position among our students and assistants. When there is developed this personal tie with ourselves, and this loyal spirit to the hospital, our men will be unwilling to leave us, and even those who for any cause do leave, will look on the hospital as their *Alma Mater* and help it on in every possible way.

In this connection may I give an instance from my own experience: Fifteen years ago I began to bring some students through a five years' systematic course. We were interrupted by the Chino-Japanese war, and several of the students went to Newchwang to help in the Red Cross hospitals there. One of them came under the notice of General Ma Yü-k'un and the Commander-in-Chief, Sung Ch'ing, gave him an important

position as surgeon in the Chinese army. At that time, under the circumstances, I did not put any hinderance in his way. Though not fully trained he has, since then, been doing good work in Yuan Shih-kai's army. Last summer, after eleven years, he returned to Mukden, and is now medical officer of health there with a blue button and a salary of about $200 a month. Though in government employ he identifies himself with the hospital, and his influence is helpful to us in many ways. He comes about us not as the *Talao Yeh* but as my *T'uti* as of old. Two of his fellow-students, abler men and fully qualified, are my assistants now with a salary of $25 a month. They could easily get six times as much, but the persoual tie is there, and I know they will not leave me. Two others have, since the Boxer time, been in private practice in Mukden, hut they readily give their services to the hospital without pay whenever they are needed. One of these has been with me for twenty-four years, and is taking my place now while I am in Shanghai.

And so, to sum up, our assistants will stay with us and do the best work when these three conditions are fulfilled :—

1st. When they receive a fair and reasonable salary.

2nd. When they are treated as belonging to the hospital family.

3rdly. When the Love of Christ constrains them to a willing sacrifice for His sake.

Now I feel that my desultory remarks have taken up sufficient of the precious time of this Conference. But I should like to say a word or two before I sit down, on the *Present Situation* aud *Outlook* in China.

Professionally we have a clearer field than ever before. Prejudice and misconceptions have given place to confidence and goodwill. Officials and people are at last understauding the object which has brought us to this land. The old rumours regarding us and our work are, to a large exteut, things of the past. Western medicine is appreciated. Our patients, already numerous, are increasing year by year. Operations of a major kind are now readily submitted to. Patients come to us at an earlier stage of their illness, so that they and we get something like justice. Fields for investigatiou are opeuing up, aud I helieve the time is near when the government will afford facilities for carrying on scientific research.

We medical missionaries should see that we take every possible advantage of this new state of matters. Much attention is now given hy the government authorities in our large cities to sanitary matters, and our advice and help are often requested. Here and in other ways we can assist by our knowledge and experience. The openmindedness of the people is striking. China is moving and we must move along with her and help in every effort that tends to bring her into line with the Kingdom of Heaven.

The inflow of Western thought and learning and literature and method, while we rejoice over it, will hring into our midst elements which may not be helpful to us but the reverse ; and it will need all the patience, tact, judgment, wisdom we possess to deal with these. But we believe the hand of God is in all the changes that are taking place in China to-day, so that we can say in the language of Morrisou: "The outlook is as bright as the promises of God."

SECRETARY AND TREASURER'S REPORT FOR 1906.

As Acting Secretary and Treasurer during the past nine months, it falls on me to report to the Society. I was pitchforked into the position so ruthlessly by Dr. Lincoln that I have hardly yet recovered my equilibrium.

The material on which to base a report is very small. Our Association has increased by thirty-five during the year. This I think is a matter for thankfulness. It means, in most cases, the advent of new workers to engage in this beneficent and divine work.

In this connection I beg to draw the attention of the Association to the present useless method of election of new members and suggest that we forthwith find a new and better one.

The list of members is, I think, up to date, but I regret to say the law to the effect that our membership be printed once a year and circulated through the JOURNAL, arranged alphabetically, has not been carried out. Statistics show that there are 207 male and ninety-four female medical missionaries in China. Hospitals number 166 and dispensaries number 241. About half of the hospitals have kindly sent in their returns; the figures for 1906 being:—

Students and helpers...	556
Beds	4,481
Operations	24,841
In-patients	34,000
Total treatments	913,200
Local Income	$205,766 Mex.
Local Expenditure	245,471 ,,

The suggestion of having a Corresponding Secretary is a good one, and if he is able to get answers out of many of the members, he will be a good man.

The strength of our Association will, I think, be found in and through its local branches. The Central China branch has made its name. At Peitaiho last summer it was arranged to form one for the North. I trust its members will see it through, and that many other centres will follow in its wake—both to the profit of themselves and of the whole Association.

As Treasurer (although I rarely see a dollar) I am glad to be able to state that our financial position is good, and refer you to the published accounts in the belated March JOURNAL. On the JOURNAL account we have a balance of $236 for the year.

Although 1,000 copies of Dr. Neal's new book on the eye have just been issued, and a second edition of 500 copies of Dr. Cousland's Physiology, our publication account shows a balance in hand of $1,584. Some further amounts are also in hand. At the same time I would remind the Association that we have undertaken a big responsibility and shall need all we can get. Dr. Cousland has come for our translation work to live in Shaughai. In the Conference we shall be asked to confirm the action of the Publication Committee Executive in this matter. That will involve somewhat heavy expense for a little Association like ours.

Still! let us prove ourselves to be alive and healthy—a Society with a good opsonic index, able and ready to overcome all difficulties.

C. J. DAVENPORT.

REPORT OF THE PUBLICATION COMMITTEE OF THE MEDICAL MISSIONARY ASSOCIATION OF CHINA.

Your committee held one or two meetings in Shanghai after the adjournment of the meeting of the Association in February, 1905, at which plans were made for starting the work of the committee, and an Executive and Editorial Sub-committee of three members was elected. A general appeal for funds for the use of the committee was ordered printed in both English and Chinese—a copy of the English circular is appended to this report—and decisions in regard to several books were made. The first book accepted by the committee was Dr. Cousland's Physiology, which was ready for delivery, and of which the first edition of 500 copies was exhausted within a year; a second being now on sale. It was also decided to accept and publish Ingram's Therapeutics and Neal's Diseases of the Eye and Skin and Venable's Bacteriology, after the sub-committee had passed upon them.

After the committee separated in Shanghai a vigorous effort was made to raise funds, and was so far successful that between two and three thousand Mexicans were collected from members of the Association and their friends, a sum which has been amply sufficient for the work of the committee so far, but which will be quite inadequate for the larger work of the future.

Negotiations were entered into with the Canton people in regard to taking over their series of medical books, which has had such a large sale, and after considerable correspondence, it was finally arranged that we should be allowed to select from their list of books any which we thought desirable and after revising them publish them at our expense, with the understanding that they are to receive 50 per cent. of the net profits. So far only the Practice of Medicine has been thus selected, and Dr. Mary Niles is now at work revising and having it printed. It is hoped it may be ready within a year. In addition to the Practice Dr. Niles has made some use of the Obstetrics belonging to the Canton series in preparing a Text-book on Obstetrics, which she has ready for publication; much of her work being a new translation of Evans' Obstetrics.

Negotiations were also entered into with Dr. Main, with a view to taking over his series of medical books, and be agreed to allow us to do so, but so far no one has had time to revise his existing books and bring them into accord with the new nomenclature, and Dr. Main himself has not had time to complete his new books, which we had hoped would be on sale before this date.

Dr. Mary Fulton, of Canton, kindly consented to prepare a new book on Diseases of Women, and her translation of Penrose is now in press, while Dr. Cousland has done some work on his contemplated translation of Osler's Practice, for which he has been promised a thousand dollars by a native Chinese friend in Kwangtung to pay for the expenses connected with its publication.

The most important matter which has come before the committee as a whole—the examination of and criticism of books being done by the sub-committee—has been the question of an editorial secretary in Shanghai.

The committee decided unanimously to request Dr. Cousland to act as such a secretary, at least for a term of years, and thus wrote to the

doctor, who was at home on furlough in Edinburgh, asking him to lay the matter before his Society. His committee viewed the matter in a very sympathetic way and wrote most cordially that they were quite prepared to allow Dr. Cousland to thus serve and would be responsible for his salary, but would like our Association to provide for the other necessary expenses connected with his residence and work in Shanghai. We on our side promised to bring the matter before the Association at its coming meeting, with the hope that there would be no difficulty in meeting their wishes. It is to be hoped that the Association will see its way clear to endorse the action of its committee and thus secure the services of Dr. Cousland as Editorial Secretary, for the experience of the past two years shows plainly the need of such an officer on the ground in Shanghai to look after the publication and translation of medical books during at least the next few years. The work will proceed much more rapidly and satisfactorily under such circumstances than will be possible otherwise.

To recapitulate: the committee now has on sale or in press the following books:—

1. Cousland's Physiology, second edition, a translation of Haliburton's.
2. Neal's Diseases of the Eye.
3. Neal's Diseases of the Skin.
4. Ingram's Therapeutics, a translation of Hare and Wood; *in Press:*
5. Niles' Obstetrics, a translation of Evans', etc.; *in Press.*
6. Niles' Practice, a revision of Kerr's translation; *in Press.*
7. Fulton's Diseases of Women, a translation of Penrose; *in Press.*

In addition to the above the following have been agreed upon and will be sent to press as soon as passed upon finally by the sub-committee and ready for printing:—

8. Venable's Bacteriology.
9. Cousland's Practice, a translation of Osler.
10. Main's Surgical Hand-book, a translation of Caird and Cathcart.
11. Main's Diseases of Warm Climates, a translation of Davidson.

Finally we should mention the fact that the Hankow book on Nursing has been turned over to the Association, and the committee's fund is receiving the benefit of the sales, though the book itself has never been formally passed upon by the committee. Dr. Whitney's Anatomy, too, and Dr. Gillison's Chemistry are suited for use in connection with the standard series of text-books which the committee is endeavoring to produce, as they contain the new terms, so that we now have either on sale or in press or planned for a series of thirteen medical text-books in Chinese.

We of course feel far from satisfied with what has been accomplished so far, but we trust that the Association will remember how slowly things move in China and how it necessarily took a long time to get things into shape for the vigorous prosecution of our work. We have every reason to hope that during the coming two or three years the work will move along much more rapidly, especially if the Association is able to provide for a permanent Editorial Secretary to reside in Shanghai to look after its publication interests.

MEDICAL PUBLICATIONS IN CHINESE.

It is no new thing to speak of the need for medical mission work in China, where practically nothing is known of the prevention or cure of disease, and the great majority still cling to their old superstitious ideas and crude methods. Almost every missionary society in China has recognized this need and done something towards supplying it. Over one hundred hospitals and dispensaries have been opened by missionary societies throughout the empire with a working force of some two hundred medical missionaries. Through these institutions about 300,000 out-patients pass year by year, paying 1,000,000 visits; into their wards 30,000 patients are received and operations to the number of 30,000 are performed. The benefits conferred, the iguorance dispelled and the good impression produced, must indeed be great; yet how small after all when compared with the needs of the 400,000,000.

It will be seen that to properly maintain these institutions trained native assistants are necessary. Heretofore these men and women have had their training in the hospital, where they were at once the students and helpers of the overworked doctor. The time seems now ripe for giving the Chinese a more thorough medical education than is possible in this way, and medical schools are being established in various centres. These schools will train, under Christian auspices, suitable men and women, and before long not only should the hospitals and dispensaries be more efficiently worked and greatly extended, but a large number of well qualified native practitioners will be available to minister to suffering humanity, whether in private practice or government employ. At the General Meeting of the China Medical Missionary Association, held in Shanghai in February, 1905, the following Resolution was adopted :—

It be *resolved* that we (The Medical Missionary Association of China) have heard with great satisfaction of the formation of Union Medical Colleges in Peking, Canton, and Shanghai, and of plans for such a school in Central Shantung, and that we urge the various missions working in China to use their utmost endeavours toward the the formation of such schools in other large centres.

In a very few of these schools the teaching is in English, but the pupils in these are the favoured few who have received a good English education. Chinese must be the vehicle for the many. The establishing of these medical schools has emphasized the necessity for more and better text-books in Chinese.

This question of text-books for Chinese medical students has always been a difficult one. The books available have been few in number, soon out of date, and worse than all, have employed different terms, to the profound discouragement of both pupil and teacher. The China Medical Missionary Association has for years had a committee laboriously preparing a standard set of terms used in medical science, and this work is now approaching completiou. With the terminology thus fixed upon, the way is opened for the issuing of a uniform series of medical text-books, where a student will not find in his physiology a set of names different from those he so laboriously learned in his anatomy. Such a series of text-books is most urgently needed, not only for the use of every doctor who trains his owu students, but more especially for use in the medical schools. Not a doctor in China but feels this need,

and, as was to be expected, the China Medical Missionary Association at its last meeting took up the question. A Publication Committee was appointed to arrange for the preparation and issuing of such works, and also for a medical journal in Chinese. It was decided to place at the disposal of this committee four-fifths of any funds remaining to the credit of the Association at the end of each year, and the committee was empowered to raise money by voluntary subscription for its work, such funds to be paid in to the treasurer of the China Medical Missionary Association.

It is believed that eventually the committee's work will be self-supporting, but to provide for the translation and publication of such a series of handbooks a present capital of, say, $5,000 is needed. The Association voted the committee $400, being four-fifths of its accumlated surplus funds, and the forty members present subscribed $400 more. This has enabled the committee to publish a translation of Halliburton's (Kirke's) Physiology, which was ready, and to begin arraugements to acquire a volume on therapeutics.

The committee now appeals to all who are interested in the welfare of the Chinese for help in this great work of giving to the Chinese good medical books and periodicals in their own language, thoroughly up-to-date and using a uniform terminology.

Such an appeal, coming from the China Medical Missionary Association, composed as it is of practically every medical missionary in China, of every denomination and many countries, should carry great weight.

Subscriptions may be sent direct to the treasurer, Dr. C. S. F. Lincoln, or through any member of the

PUBLICATION COMMITTEE:

J. B. NEAL, M.D., *Chairman*,	A. P. Mission,	Chi-nan-fu.
J. BUTCHART, M.D., *Secretary*,	F. C. M. S. ,,	Lu-chow-fu.
P. B. COUSLAND, M.B., C.M.,	Eng. Pres. ,,	Chao-chow-fu, Swatow.
CECIL DAVENPORT, F.R.C.S.,	London ,,	Shanghai.
T. GILLISON, M.B., C.M.,	London ,,	Haukow.
C. S. F. LINCOLN, M.D.,	Amer. Epis. ,,	Shaughai.
MARY NILES, M.D.,	Amer. Pres. ,,	Canton.
W. H. PARK, M.D.,	M. E. C. S. ,,	Soochow.
J. M. SWAN, M.D.,	Amer. Presb. ,,	Canton.
W. H. VENABLE, M D.,	S. Presb. ,,	Ka-shiug.
H. WITTENBERG, M.D.,	Basel . ,,	Kia-yin-chow.

PUBLICATION FUND.

Subscriptions to date	$3,733
Sales to end of 1906	1,088
	$4,821

EXPENDITURE.

Printing, illustrating, advertising and publishing ...	$2,463
Credit balance	2,350

These figures are approximately accurate.

P. B. COUSLAND.

SHANGHAI, April 18th, 1907.

MEDICAL MISSIONARY CONFERENCE.

Shanghai, April 19, 1907.

FIRST SESSION 9.30 a.m., Friday. *Business Session.*

The meeting was called to order at 9.30 a.m. by Dr. Christie, President of the Medical Missionary Association, and the first half hour was given up to devotional exercises.

Election of Conference Secretaries.—Dr. Davenport, Secretary of the Association, stated that on account of hospital and other duties he could not act as recording secretary during the Conference. The names of Drs. MacWillie (Wuchang) and Hume (Changsha) were proposed for Conference secretaries. Dr. Jefferys moved that the nominations be closed, and the two gentlemen were elected.

Election of New Members.—The following names were proposed for membership in the Association. After they had all been nominated, Dr. Davenport read the names all together, and Dr. Beebe moved that they be elected. Seconded. Carried unanimously :—

Adrian S. Taylor, M.D., Univ. Virginia. Southern Baptist Mission, Yangchow, Kiangsu, by C. M. Lee.

Isabella Mack, A.B., Smith College; M.D., Women's Med. Coll., Penn.; A. P. M., Canton, China, by Francis F. Cattell, M.D.

Rosella Sherwood Hall, M.D., Women's Med. Coll. Penn. Methodist Episcopal Mission, Pyong Yang, Korea, by Hugh Weir.

Thomas H. Daniel, M.D., Southern Presbyterian Mission of Korea, Kunsan, Korea, by Hugh Weir.

J. Hunter Wells, M.D., A. P. M. U. Pyeu Yang, Korea, by Hugh Weir.

F. C. Krumling, M.D., Michigan Evang. Assoc., N. America. Chen Chow, Hunan, by A. Graham.

F. F. Allan, M.D., Denver, Col. Canadian Methodist, Chentu, Szechuan, by J. R. Cox.

Herbert V. Wenham, M.B., B.S., F.R.C.S., Eng. Union Med. Col., Pekin, by C. J. Davenport.

Thomas Cochrane, M.B., C.M. Ed. L. M. S., Pekin., by C. J. Davenport.

J. C. McCracken, M.D., Univ. Penn. U. of P. Med. Mission. Canton, by W. H. Jefferys, M.D.

David T. Stewart, M.D., South. Pres. Soochow, by W. H. Park.

Sidney H. Carr, M.D., Edin. China Inland Mission, Kaifeng Fu, Honan, by Dr. Gillison.

C. W. Somerville. Wuchang. L. M. S.

Andrew Young, L.R.C.P. and S.Ed. B. M. S. Hsiaufu, Shensi.

Charlotte Murdock Young, M.A., M.D., of Baltimore, M.D., B.M.S., Hsianfu, Shensi. Proposed by Dr. Stuart.

Andrew Wight, M.B., Ch.B. Eng. Presb. Ed. Chaochowfu. Proposed by Dr. Cousland.

REPORT OF THE COMMITTEE ON MEDICAL TERMINOLOGY.

Since your committee was appointed by the last Conference it has devoted its attention to critically examining the terms in the published lists and to adding new terms, especially in the light of the tests afforded by the translation of various medical works and experience acquired in teaching. The Committee is now in session and is utilizing the presence at the conference of some translators who are not members of the committee.

As a result of its labours it hopes to be able to issue this autumn a fairly complete Anglo-Chinese Lexicon of the terms used in the various branches of science necessary for a thorough medical education. It also proposes to publish a Chinese medical dictionary with explanations in that language. To this end it suggests that it (the Terminology Committee) be reappointed and that it be instructed to work in co-operation with the Terminology Committee of the Educational Association, so as to harmonise the two sets of terms.

PHILIP B. COUSLAND,
Chairman.

SHANGHAI, *April 18th, 1907.*

President's Address.—Dr. Christie (Moukden).
1. Our work a spiritual work.
2. The problem of assistants.
3. The hopefulness of it.

The Editor's Report.—Dr. Jefferys (Shanghai).
The Secretary's Report.—Dr. Davenport (Shanghai).
Report of the Committee on Medical Terminology.—Dr. Cousland (Shanghai).
Report of the Publication Committee.—Dr. Butchart (Luchowfu).

The reading was followed by a statement giving the balance sheet of the account of the Publication Committee.

The President thanked the gentlemen who had prepared the reports and also expressed gratitude that the English Presbyterian Society should have allowed Dr. Cousland to remain in Shanghai for a term of years as Editorial Secretary.

Dr Butchart further read the notes of a special meeting of the Publication Committee held last evening (April 18th, 1907). The following items were transacted at that meeting :—

1. The report of the Committee just read, was adopted for presentation to the Association.

2. It was recommended to request the Association to appoint Dr. Cousland Chinese Editorial Secretary.

3. Dr. Jefferys was appointed to draft a letter of thanks to Rev. W. Dale, of the English Presbyterian Society, for allowing Dr. Cousland to act as Editorial Secretary and to present the same to the Association for its endorsement.

4 It was voted to ask the Association to vote $1,200 Mex. annually to cover Dr. Cousland's house expenses —$800.00 for house rent, $400.00 for a Chinese writer. Also, an additional $400 for an English-speaking writer, if funds provided were sufficient.

5. Dr. Cousland was asked to prepare a statement of account of the Publication Committee. Dr. Butchart called attention to the fact that the books already published were exhibited on a table in the corner of the hall.

BUSINESS ARISING OUT OF THE REPORTS.

I. The Editor's Report.

1. Change of Name.—Dr Jefferys made the following motion: *Resolved*, That the name of the JOURNAL be changed to "THE CHINA MEDICAL JOURNAL, published by the Medical Missionary Association of China." Seconded by Dr. A. W. Tucker (Shanghai).

Dr. Christie said the question was an important one and decision should be made only after due deliberation.

Dr. Davenport said that he was adverse to the change when it was first mentioned to him, but that he was now convinced it would be a good step. The missionary standard would not be lowered, and we should have a better journal.

Dr. Venable (Kashing) asked whether the change would come into force at once, two issues for 1907 having already appeared, or whether it would be postponed till 1908.

Dr. Jefferys replied that this decision would have to be made by the Conference. He was convinced that a majority of the interested members would approve the change. The original suggestion was made to him by Dr. Booth, of Hankow, and he felt sure the Hankow delegation would support the action.

Dr. Kilborn suggested that it might be well to postpone action till the question could be put to *all* members of the Association through the pages of the JOURNAL.

Dr. Beebe (Nanking) said he was decidedly in favor of the change. There would be no change in the fact of its being a missionary journal, but merely a change of name. It would only serve to improve the JOURNAL. It would be unwise to leave the question for all the members of the Association to act upon. The members present were certainly the most interested and capable of making the decision.

Dr. Gillison thought the resolution should say that no change of purpose or motive was contemplated, in order that the position of the Association might be perfectly clear in the future. He suggested the following rider: "It being understood that this change of name in no way implies a change in the character of the JOURNAL as being a missionary as well as a medical JOURNAL." Dr. Jefferys accepted the rider.

Dr. Stuart said that when the name was being changed, there might be contemplated some change in the form of the JOURNAL. If this were so, and the change were made now in the middle of the year, it would be awkward in having one's journals bound. He thought the question should be elaborated.

Dr. Boone spoke as one of the original committee of the Association as well as of the JOURNAL. There were no precedents to go by at the start. All the work was understood to be tentative. It was hoped that the Association *would* modify the constitution as might be expedient. He now felt that if the JOURNAL could be improved by modifying its name, this should be done. There would be no gain in delay and none in proposing the question to all the medical missionaries in China.

Dr. Jefferys expressed his appreciation of Dr. Boone's generous support.

The President read the motion in its modified form.

"*Resolved*, That the name of the JOURNAL be changed to THE CHINA MEDICAL JOURNAL, published by the Medical Missionary Association of China; it being understood that this change of name in no way implies a change in the character of the JOURNAL as being a missionary as well as a medical journal."

Dr. Selden (Canton) said that he believed it would be desirable to help our JOURNAL find its way into the scientific world, an obvious result of the change of name. While there were many things not as they should be, yet there was much of our work of which we ought not to be ashamed. He felt that the words "published by the China Medical Missionary Association" ought to be in plain letters on the cover.

Dr. Jefferys heartily agreed to this. Attention was called to the fact that these words are at present seen on the JOURNAL'S cover, but they could be printed in still larger type if thought well.

Dr. Wells (Pingyang, Korea) said the proposed change strongly appealed to him.

The President put the question, and it was *unanimously carried.*

The President asked whether the change were to be made at once.

Dr. Jefferys replied that it would be, unless the Association ordered otherwise. The form would not be changed in the middle of the year. He asked whether Dr. Stuart had any definite suggestion as to change of form.

Dr. Stuart said that he had no definite suggestion to offer. His thought was not so much that the size and shape would be altered, as that some change might be made in the type and cover.

Dr. Boone asked to be allowed to introduce the Rev. Dr. A. S. Lloyd, General Secretary of the Board of Foreign Missions of the American Episcopal Church, now visiting China, and one who was taking an interest in the sessions of the Medical Missionary Association.

Dr. Lloyd expressed his pleasure in being present.

The President cordially welcomed Dr. Lloyd and expressed his pleasure and that of the Association in having him present.

2. Vote of Thanks.—Dr. Beebe moved a vote of thanks to the editors of the JOURNAL for their faithful and fruitful services in connection therewith.

Seconded by Dr. Venable.

Carried with acclamation.

II. *The Secretary's Report.* 1. Election of New Members.

Dr. Davenport said that the present method of election of new members was antiquated and thoroughly useless. He made the following motion :—

Resolved, That every new member be nominated by two members, and that the publication of his name in the JOURNAL be considered as his election.

Seconded by Dr. Beebe.

Dr. Stuart asked for an explanation of Dr. Davenport's proposition.

Dr. Boone asked whether it would not be wise to have some body of men sit in judgment on each candidate. Would it not be well to be able to shut the door of admission if thought necessary? Probably ninety-five per cent of the candidates would be eminently desirable members, but there might be five per cent. whose qualifications would require consideration before they could be admitted.

Dr. Davenport said Dr. Boone's thought was perfectly reasonable. But in the case of candidates from Szechuan or Formosa or other distant place, how could his qualifications be determined? He thought the Association could trust the two proposers.

Dr. Boone thought it would be better to wait six months after proposal of names, before election, rather than elect indiscriminately. The candidate might be proposed by two men who were themselves among the questionable five per cent. The decision should, in some way, be left to designated officers.

Dr. McAll (Haukow) rose to a point of order. Article III of the Constitution would require to be altered before Dr. Davenport's motion could be put.

Dr. Gillison asked whether Dr. Davenport's proposition was to be added as a rider to Article III of the Constitution or whether it was to be substituted for that Article. He proposed that six men recommend each new candidate.

Dr. Avison said that for one living in Korea it might be difficult to get six proposers.

Dr. Cousland moved that inasmuch as Dr. Davenport's motion involves a change in the Constitution, the question be remitted to a committee for consideration and report.

Seconded by Dr. J. L. Maxwell. Carried.

This was modified so that the committee, consisting of Drs. Beebe, Gillison, Maxwell and Stuart, were asked to bring a report on a revised Constitution.

CHINESE EDITORIAL SECRETARY.

Dr. Davenport moved, That this Association confirms the action of the Publication Committee in the steps it has taken in the appointment of Dr. Cousland to undertake our Chinese translation work, providing funds are forthcoming.

Seconded by Dr. Stuart. Carried.

On Dr. Stuart's motion, seconded by Dr. Park, the letter written to express to the English Presbyterian Board appreciation of their kindness in liberating Dr. Cousland for this work, was approved, and was signed by the President.

Dr. Butchart spoke on the question of funds for Dr. Cousland's work; his salary having been guaranteed by his own Board. Three sources were considered: 1. The Association could vote the money from sale of books. 2. Funds could be pledged from hospital receipts. 3. Funds could be requested from the Societies represented by each physician.

It was decided to start a subscription among the members of the Association present and to use the money accruing from the sale of medical books solely for the publication of more books.

Afternoon Session. Friday, April 19th.

Dr. Christie occupied the chair. Dr. Park led in prayer.

The business left over from the morning session was continued.

The following resolution was moved by Dr. Park, seconded by Dr. Machle and carried: That the recommendation of the Publication Committee be adopted. The following is the recommendation:—

"*Resolved*, That the sum of $1,200.00 per annum be recommended to the Association as the amount necessary for Dr. Cousland's expenses in connection with the work of Chinese Editorial Secretary of the Publication Committee, being $800.00 for house rent and incidental expenses and $400.00 for a non-English-speaking writer and that Dr. Cousland, with the consent of the Publication Committee, be empowered to draw a further sum of $400.00 from the funds of the Committee should it be necessary to employ the services of an English-speaking writer."

Dr. Plummer suggested that each member of the Association be responsible for the sum of $40.00 to $50.00.

Dr. Maxwell suggested that subscriptions be asked for during the Conference.

Dr. Stewart did not think it well to have separate funds for the expenses of Dr. Cousland from the general funds of the Publication Committee.

Dr. Cousland drew attention to the fact that we shall require to raise more than $1,200.00 per annum so as to meet the expenses of printing new translations.

Drs. Gillison and Kilborn also took part in the discussion.

It was moved by Dr. Stewart that "A represeutative committee be appointed in conjunction with the Publication Committee to solicit funds for publication purposes.

Seconded, by Dr. Gillison and carried.

A letter was read from Dr. Neil McLeod suggesting that he exhibit a case that he has under treatment with Radium. Dr. McLeod offered to show the members of the Association the X-Ray apparatus at the General Hospital.

Dr. Jefferys moved that the office of Curator of the Museum be abolished.

Dr. Hodge asked where the specimens which he had given the Association, when the museum was commenced, were.

Dr. Jefferys, in the absence of the Curator, replied that the specimens had become dried up and were useless

Dr. Kilborn pointed out that the motion was out of order, as it would make a change in the Constitution.

The matter was then dropped.

Dr. Cousland drew attention to Clause 4 of the Constitution.

It was moved by Dr. Kilborne, seconded by Dr. Cousland and carried: "That the Constitutions and By-laws in their present form be referred for review and possible revision to the committee already appointed to deal with Article 3."

The President gave notice of the appointment of members to the following committees:—

TERMINOLOGY COMMITTEE.

Drs. Neal, Stuart, Ingram, McAll, Cousland, Venable, Gillison and Morley.

PUBLICATION COMMITTEE.

Drs. Venable, Park, Butchart, Swan, Niles, Cousland, Christie, Gillison, Davenport, Wittenberg, Neal, Stuart, Cochrane (Pekin), Wilkinson and Kilborn and the Editors of the JOURNAL, ex-officio.

ELECTION OF OFFICERS.

Dr. Hodge asked if the members who had sent their votes and were not present, would have their votes counted. The President answered, Yes.

Dr. Davenport said that all the nominations had not been before all the members.

The Secretary read the names of those who had sent their votes in. After a general discussion, Dr. Hodge moved that the votes sent in be admitted.

Dr. Beebe moved, seconded by Dr. Park, "That we, here, at this meeting proceed to elect officers.

Carried.

Dr. Park moved, seconded by Dr. Butchart and carried unanimously, "That the Secretary be instructed to cast the ballot for Dr. Stuart for President of the Association."

A ballot was then taken for the remaining officers.

The secretaries of the Conference were appointed scrutineers.

The following Doctors were elected:—

Vice-President - -	Dr. DAVENPORT.
Editors - -	Drs. JEFFERYS and BOOTH.
Secretary-Treasurer -	Dr. COUSLAND.

The retiring President, in a short speech, thanked the members for their help and welcomed the incoming President to the chair.

Dr. Christie vacated the chair and Dr. Stuart in a short speech thanked the members for the honor they had given him and made fitting acknowledgment of the splendid service done for the association by Dr. Christie.

Dr. Boone moved, seconded by Dr. Beebe and carried by a standing vote: That a unanimous vote of thanks be tendered Dr. Christie.

Dr. Christie briefly replied.

Dr. Jefferys moved, seconded by Dr. Whitney: "That in the matter of a Corresponding Secretary for the Association the Committee on the Constitution and By-laws be instructed to prepare an article to cover this point. Carried.

Dr. Maxwell read a paper on, "Does the Association fulfill its object in relation to the progress of science?"

In the discussion which followed, Dr. Hodge, Hankow, drew attention to the great advances made since he first came to China. Then most of the doctors placed the evangelistic work first and gave any spare time they had to the medical work, and very few did any research work. Now almost all think the medical work the most important for the doctors to do. He said that already the C. C. M. A. had taken up some of the work Dr. Maxwell had recommended and mentioned the work of the Research Committee which this year is undertaking the examination of fæces. He told that the Scistosoma Japonicum had been found in Changteh, Nganking and at Hankow. He did not believe much in statistics, believing that they had done much harm, making for quantity rather than for quality.

Dr. Avison, Seoul, Korea, spoke of the necessity of keeping ahead of the Japanese doctors in the scientific part of the work. He desired to have a discussion

on the undermanning of the hospitals and thought we were too modest in our desires and requests for more help, both foreign and native

Dr. Wells, Pingyang, Korea, recommended union Hospitals and said that when he went back to his station, he would join the other hospital in their work, thus giving to one hospital three doctors and a superintendent, and he thought they would do more for the glory of God than in having two undermanned establishments.

Dr. Selden, Canton, in charge of the Kerr Insane Asylum, was making a study of his speciality, and hopes to have some of the results of his investigations in the JOURNAL. He noted the appearance of a type of alcoholic insanity in the Chinese from the use of brandy.

Dr Boone, of Shanghai, spoke of the value of training the Chinese students to do the laboratory work.

Drs. Kilborn, Venable, Hart, Jefferys, Wilkinson, Christie and McAll also took part in the discussion.

Dr. Jefferys moved that "a committee of five, with power to add to their number, be formed to consider research work." This was seconded by Dr. Gillison and carried.

Dr. Davenport said that Dr. Stanley, of the Shanghai Health Department would, he was sure, be glad to give assistance in the examination of doubtful cases.

The session was closed at 4.30 o'clock after prayer led by Dr. McAll.

Evening Session.

An exceedingly interesting and instructive exibition of lantern slides was given by Dr. Butchart. Mr. Bevan, of the L. M. S., Shanghai, kindly loaned and managed the lantern. The slides were explained by Drs. Butchart, Maxwell, Davenport, Jefferys and Gillison.

Saturday Afternoon, April 20th.

Dr. Hodge read a paper on "Syphilis in China."

Dr. Maxwell noted that notwithstanding the frequency of syphilis in Japan, there was but little effect on the national life. Though an infinitely larger proportion of the Japanese were syphilitic their children were remarkably healthy, much healthier than the Chinese. He gave an example of the difficulty in diagnosis between syphilis and cancer. A case came to him showing primary sores. A few months the case came again for treatment with the sores unhealed. The organ was amputated, and on microscopical examination it was found to be cancerous. He had found syphilitic arteritis and gangrene not uncommon. Hemaplegia was also common. In syphilis of the joints the diagnosis was difficult, in appearance it resembled tuberculosis. It was a little more painful, and there was a little less fluid.

Dr. Selden said that in sixty cases of insanity that had come to him during the past five months, only four or five had general paralysis.

Dr. Jefferys had twice ligated the carotid, popliteal and femoral for aneurism. In the past three years he had had six cases.

Dr. Davenport noted the rarity of keritiis due to syphilis and spoke of syphilis of the bowel and rectum. He thought that the infection settled on dysenteric ulcers.

Dr. Boone had made careful inquiries into the history and condition of all his patients with reference to syphilis and found that three quarters of them had it. He gave the testimony of a medical friend in Japan that every Japanese had the disease and that it was worse among the nobility. The form among them was much milder.

Dr Venable pointed out that in speaking of the proportion of any disease in a country we must bear in mind that we only saw an infinitesimal portion of the people.

Dr. Park said that hereditary syphilis was common in Soochow and that he met with a mild and a very severe type of the disease. The severe type seemed to come from a particular locality, which probably brought the infection from Shanghai.

Dr. Wilkinson confirmed the experience of Dr. Park.

Dr. Machle said that an accurate enumeration of the cases in the Philippines showed that seventy per cent. of the people had syphilis.

Dr. Kilborn said that it was very prevalent in West China.

Dr. Carr asked if it was thought that some of the many cases of fistula in ano were due to syphilis.

Dr. Hodge thought that a very small number, if any, were due to this. He had only seen one or two cases of syphilis of the joints. He noted the difficulty of diagnosis in some cases on macular leprosy.

Dr. McLeod presented a case of nevus which he was treating with radium. The treatment had been going on for two years and was showing marked improvement.

Dr. McLeod then presented the histories of two very interesting abdomiual cases.

Dr. Avison gave some notes on a case of paralysis of the bowel after delivery; the case had been infected before delivery.

Dr. Maxwell told of a case of spasm of the bowel.

Dr. Wells asked what could be said of the use of anti-strepticoccus serum before and after operation.

Dr. Davenport spoke of the great disadvantage we were under in not being able to conduct post mortem examinations.

Dr. McLeod gave a very interesting exhibition of the use of, and the appliances for, usiug a new general anesthetic, "Somnoform"

The President expressed the thanks of the Conference to Dr. McLeod for his interesting cases and papers.

Dr. Maxwell presented a resolution to the Conference of the opium question and also read an interesting extract from a letter ou the subject.

The resolution was then moved by Dr. Maxwell, seconded by Dr. Park and carried.

The resolution reads as follows:—

(1). That this meeting, representing the medical profession scattered throughout the length and breadth of this Empire, do reaffirm its opinion that the habitual use of opium is physically most injurious and morally degrading. Further, that this meeting desires to place on record the extreme satisfaction with which it views the recent Imperial Edict abolishing the opium traffic witbin ten years' time.

(2). That, seeing from time to time the opposite opinion has gained credence in many quarters, this meeting of medical men aud women desires to record the fact which experience has taught its members, that comparatively little danger to life is incurred in the immediate stopping of the drug compared with the continuation of the habit.

(3). That this meetiug respectfully approach the Imperial Government, promising to do all in the power of its members to medically assist in lessening the sufferings of those deprived of the drug by imperial edict.

(4). That copies of this resolution be placed in the hands of the Central Government, the provincial Viceroys and the local Press.

Dr. Selden spoke of asking the governmeut to prohibit the importation of foreign liquors.

Dr. Selden moved, seconded by Dr. Machle and carried: "That a committee be appointed to prepare a memorial to the throne, calling attention to the evils resulting from the increasing use of foreign liquors and of cigarette smoking in China and urging the government to take some measures to prevent their spread before it is too late.

Dr. Kilborn moved that the subjects of patent medicines and tobacco be included in the motion.

Dr. Selden agreed to include tobacco.

Dr. Gillison pointed out the difficulty in that so many foreign nations were affected.

Dr Selden spoke of the widespread influence already attained by these things.

Dr. Hamilton said we could help by not prescribing alcoholics for our patients.

Dr. Beebe wanted to know if it was desired to influence the Government or to have a deliverance from the Association.

Dr. Venable thought that we might call the attention of Dr. Hallock to the harm done by advertising patient medicines and alcoholics in his almanac.

Dr. Boone reported that Dr. Hallock had asked him about this matter. He had pointed out the harm done and Dr. Hallock said that these objectional advertisements would not be admitted in future editions.

Dr. Day, a Chinese physician, spoke from the Chinese point of view. He said that the Chinese drank their own wine in small quantities and warm. When they drank foreign alcoholics they drank in foreign fashion, taking large quantities. The effect of Chinese wine was usually to make, first a little boisterous and finally very sleepy. They drank foreign liquors so freely that they very quickly became quarrelsome and then dead drunk.

Dr. Boone spoke of his long experience with foreigners in Shanghai and said that when they drank Chinese brandy it produced worse effects than any other alcoholics in any other place.

The President appointed Drs. Selden, Machle and Beebe as members of the committee for considering the alcoholic and cigarette evils.

Dr. Venable led in prayer. The meeting adjourned.

Surgical Session. April 20th, 1907.

The meeting was called to order at 9.30 a.m. by Dr. Hodge, who conducted devotional exercises. The President then took the chair and called for the reading of the minutes. These were read, corrected and approved. The President asked whether there were new names to be proposed for membership. None were presented. The Committee on Revision of the Constitution was still working and not yet ready to present a report.

Dr. Cousland made the following motions:—

1. That Dr. Cormack be added to the Committee on Terminology.

2. That the Committees on Terminology and Publication be authorized to add to their number.

Seconded by Dr. Davenport. Carried unanimously.

Dr. Davenport asked that a definite answer be given to Dr. McLeod as to the time when members would visit the General Hospital to see the working of the X-ray machine.

The Committee on Revision of the Constitution returned, and Dr. Gillison, its Chairman, asked to be allowed to read the draft of the revised Constitution and Bye-laws and to present the full report on April 22nd.

Dr. Kilborn moved that the draft be read, and accordingly Dr. Gillison read the preliminary report of the Committee.

Dr. Hodge moved that discussion on the report be postponed and that the order of the day be resumed. This was agreed to.

Dr. Cousland moved that the Committee on Revision of the Constitution and Bye-laws be asked, if time allowed, to have their proposals printed and circulated among the members present before they were considered. Seconded and carried.

Dr. McAll moved that the President announce who were to constitute the Permanent Committee on Original Research. The President said he would make this announcement at the close of the morning session.

Dr. Hart then read a paper on "Asepsis and Antiseptics as applied to Conditions in China."

Discussion.—Dr. Jefferys: In St. Luke's Hospital (Shaughai) the nurses wear an inexpensive blue uniform to distinguish them from the coolies. $50.00 provided four suits a piece for six nurses for two years. In the operating room a white jacket was worn instead of a blue, also white shoes with rubber soles.

Dr. Butchart (Luchowfu) reported the following as useful devices:—

a. For suture material, ordinary white cotton thread, drawn through wetted hard paraffin; the excess being wiped off with cotton. Such thread absorbs less serum and is easier to tie.

b. For sterilizing catgut, wind three feet around a short length of glass tubing, drop into a bottle of alcohol, and after the bottle is well stoppered, boil in any sort of a kettle. A Tansan bottle may be used.

c. Waste absorbent cotton and cotton wool are being washed and re-sterilized as well as gauze. This has not yet proved very successful.

d. In sterilizing gauze dressings, they can be wrapped in Chinese oiled paper, and the steam seems to penetrate and sterilize the contents of a package as effectively as if wrapped in cloth as usual. One great advantage is that bacteria are less liable to penetrate the paper than cloth.

e. The Arnold sterilizer being difficult to keep in order, a brass pan has been devised, over which the top can be readily fitted, thus simplifying the apparatus.

Dr. Venable (Kashing) dwelt on the great importance of sterilizing the surgeon's hands; contamination being most likely to occur from this source. Formerly reliance was placed on *potassium permanganate*, followed by *oxalic* acid, but Dr. Harrington, of Boston, proved by exhaustive tests that this method was not thorough. Harrington's solution seems to meet every requirement, though it is impossible at one's station to make proper bacteriological tests. This solution is hard on the hands. It is surprising that more attention is not given to alcohol as a disinfectant; solutions of *bichloride* in it, for example, being more potent than aqueous solutions of the same. Dr. Venable cannot agree with Dr. Butchart as to the reliability of sterilization of packages wrapped in oil paper. Steam, when not under pressure, does not penetrate to the interior of bundles of dressings.

Dr. Wilkinson (Soochow) made a plea for simplicity, especially when there were students to be considered. The hands should be washed in several changes of sterile water, green soap and a nail brush freely used, followed by soaking in *bichloride* solution. The thorough bathing of hands, especially around the nails, with *turpentine*, followed by rinsing, in strong alcohol, is very effective. Even when Chinese students are taking part in operations, asepsis can be maintained with the use of this latter method.

Dr. J. G. Meadows (Wuchow) commended the method of Pryor at the New York Polyclinic, where *sodium carbonate* and chlorinated lime are used for disinfection of hands. Dr. Pryor claims lower mortality in gynecological work than any other surgeon in the United States. Rubber gloves should be used in all infected cases. In infected wounds nothing is better than to pour in equal parts of *balsam of Peru* and *castor oil*, covering over with rubber tissue.

Dr. Wells (Korea) also pleads for simplicity. Assistant's hands should be kept away from the abdominal wound. Bad surrouudings should not cause any hesitation about operating; good results were obtained in one case in a room hung with cobwebs.

Dr. Plummer read a paper on "Necrosis of the Femur."

The reading of the paper was interrupted by the visit of a delegation from the Shanghai Missionary Association, consisting of Dr. Hykes, of the American Bible Society; Mr. Darroch, of the Shansi University Translation Department, and Mr. Bevan, Secretary of the Association.

Dr. Hykes presented the fraternal greetings of the Association and extended a cordial welcome to Shanghai to all members of the Medical Missionary Association. Dr. Hykes spoke of the time when medical missions were not given the importance they now have. Years ago Dr. Russell Murdoch, of Baltimore, on making application to the Presbyterian Board as the first candidate for appointment as a medical missionary to Chiua, was refused, because at that time this Board was not sending out medical men. Dr. Hykes also spoke of the time when medical missionaries were spoken of disparagingly in comparison with community doctors; but the work of men like Dr. Kerr, of Canton, and of other men all over China, was sufficient to show the power and influence of this work. Medical work has been one of the greatest evangelistic agencies in China.

Mr. Bevan, Secretary of the Shanghai Missionary Association, also extended a hearty welcome to the delegates present.

Mr. Darroch testified to the great services rendered by medical men everywhere; his own family having received ministrations that he could never forget.

The President spoke for the Medical Conference and thanked these gentlemen, and through them the Shanghai Missionary Association, for the cordial welcome just given. He then introduced the Rev. Dr. Bevan, of Melbourne, father of Mr. Bevan, who had just spoken. Dr. Bevan also testified to the worth of medical missions. He rejoiced that two of his sons were permitted to work in China.

After this Dr. Plummer concluded the reading of his paper. The President called attention to the fact that Mrs. Audrew Young, a daughter of Dr. Murdoch, to whom Dr. Hykes made reference, was preseut at the Conference, having receutly come as a medical missionary to China.

The President named the members of the Permanent Committee on Original Research as follows:—Chairman, Dr. J. L. Maxwell (Formosa), Doctors Somerville (Wuchang), Kühne (Tungkun), Houghton (Wuhu), and Jefferys (Shanghai).

Dr. Park rose to make a motion regarding the restriction of the use of opium, but deferred this in view of Dr. Maxwell's proposed resolution. The meeting adjourned for recess at 12 noon.

Session. Monday Afternoon, April 22nd.

The Conference was called to order at 2.10.

The President called for Dr. Boone's paper.

As quite a number of the members had not arrived, Dr. Kilborn suggested that Dr. Boone's paper be delayed.

The President called for reports of committees and resolutions.

It was moved by Dr. Maxwell, seconded by Dr. Park and carried: That a committee be appointed to arrange the translation into Chinese of the opium resolutions and the forwarding of them to the authorities.

The President appointed Drs. Christie, Park and Main to be the committee.

It was agreed to follow the suggestion that Dr. Lambert had made in the morning to publish a manual for the guidance of Mission boards and for the use of new missionaries.

The President appointed Drs. Boone, Davenport and Cousland to be a committee.

Dr. Davenport spoke of the use of protoargol in tracoma, using it in the strength of half water and half protoargol.

Dr. Park spoke of the usefulness of a "hand paint machine" for the preparation of ointments. The machine could be obtained from any of the U. S. drug-houses—Schieffliu, New York.

Dr. Butchart told of the use he had made of a meat grinder in preparing pill mass.

Dr. Boone read his paper on "Cyclic Vomiting."

Most of the discussion centering about a different condition than that referred to in the paper, it was desired that no minute be made.

The President introduced Dr. Leonard, secretary of the missionary societies of the Methodist Episcopal Church.

The paper contributed by Dr. Logan on "Some Problems in Sub-tropical Medicine with Special Reference to the Use of the Microscope," was read by Dr. Hume.

Dr. Logan sent a number of slides with blood specimens and also some samples of faeces with various ova to illustrate his paper.

These specimens were exhibited under the microscope during the discussion.

Dr. Weir (Korea) had found the ova of the schistosoma Japonicum.

In one case, much swollen, the ova were abundant; as the case progressed the patient became emaciated and there was a corresponding increase in the number of ova present. The patient died.

Dr. Venable told of a case of a dog in which at post mortem a few hours after death a large bundle of filaria was found coming from the heart. The filaria were from six to seven inches long.

Dr. Jefferys showed the style of glass Dr. Logan used as a warm stage. He discussed what Dr. Logan called the unfertilized egg of the Ascaris Lumbricoides. "Unfertilized eggs" do not resemble those in the lower ovary and upper uterus not yet impregnated. They might be found pure in the uterus if no male worm were present and mixed when males were yet plentiful. He had found them pure in the stools when only a male worm could be obtained with repeated doses of *santonin*. That these eggs cannot be made to hatch by incubation. He is not entirely satisfied with the unfertlized theory. The constriction in the female worm is always present more or less. It is the muscular band at the vaginal opening.

Dr. Maxwell did not agree with the theory of the X egg. One often got a mixed infection; he did not understand how some could escape.

In 250 cases he had tabulated, forty-seven showed mixed infection and fifteen cases showed pure X egg infection. He thought Dr. Logan correct in believing that the ankylostoma found entrance to the body through the skin. In his series of cases ninety-six showed the ankylostoma. Of farmers and coolies 44 6 per cent. had it. In gardeners 100 per cent. had it, and in all others only twenty per cent. had it. He had not been able to find the Leishman Body, though he had punctured the spleen and "without causing death."

Dr. Hodge said that puncture of the liver was quite as good as puncture of the spleen, and there was no danger.

The Treasurer announced that $25.00 had been subscribed towards the expenses of the Conference and that $45.00 were yet required.

Medical Session. April 22nd, 1907.

The meeting was called to order at 9.30 a.m. by Dr. DeVol, who conducted devotional exercises. The minutes of the previous session were read, corrected and passed.

The President announced that the expenses of the Conference would be between $65 and $75 Mexican. Those who wished to contribute toward this expense were asked to hand their subscriptions to the Treasurer. It was further announced that the report of the Committee on Revision of the Constitution was in press and would be ready by afternoon.

Dr. Cousland presented the name of a new candidate for membership, Herman Vortish, M.D., proposed by H. Wittenberg. Dr. Vortish is at Hoynan, via Canton, a member of the Basel Mission. Seconded and carried.

Dr. Kilborn asked when the roll was to be called. It was decided that what was really wanted was a means of identifying members who were actually present. The roll was called, and the President asked those who had not yet registered to do so at once.

Dr. Boone moved that we hear the report of the Committees. Seconded, but there was no Committee ready.

Dr. Tooker moved that Dr. Ida Scudder, of Vellore, India be made a corresponding member. Dr. Layton moved the admission of Dr. Mabie, of the Congo region, in the same capacity. Carried unanimously.

Dr. Hodge asked that papers should be read deliberately and clearly, so that those in the rear of the room might hear distinctly.

The President read a letter from the Editor of the *Chinese Christian Almanac* expressing regret that advertisements had appreared in that periodical which did not meet with the approval of the Medical Conference. He asked that certain members of the Association be named whom he might consult before inserting advertisements of such medicines.

Dr. MacWillie moved, seconded by Dr. Park, that this Association appoint a committee of three members of the Association resident in Shanghai to confer with the Editor of the *Chinese Christian Almanac* in regard to the advertisements of patent medicines in the almanac.

Dr. Gillison thinks such a committee should not be appointed, as it would be awkward to feel that all advertisements of patent medicines appearing in the almanac had one's imprimatur, while those not appearing there were all to be regarded as condemned.

Dr. Hodge suggested that a reply be given to Mr. Hallock to the effect that the committee would consider such patent medicines as had their formula given in full, and no others.

Dr. Jefferys seconded this motion.

Dr. Wells thought there were remedies, Hood's Sarsaparilla, for example, whose formula was required to be printed in full on the label, and yet were distinctly medicines of which the profession would not approve.

Dr. Boone agreed with Dr. Hodge; he thought it would be too heavy a burden to lay on a committee to ask them to make the necessary decisions.

Dr. Hodge moved that we reply to Mr. Hallock that we would not criticize any medicine, the formula of which was plainly given. We have no right to prevent people from taking what is bad for them, if they want it.

Dr. Gillison asked what guarantee there would be that the published formula was the correct one. He thought the Association should assume no responsibility whatever.

Dr. Hodge said that was exactly the thought in his mind when he made his motion.

Dr. Beebe thinks with Dr. Wells that there were patent medicines with published formulæ which we knew to be harmful. We should assume no responsibility whatever.

SHANGHAI, *April 22nd, 1907.*

MR. CHAIRMAN, GENTLEMEN AND LADIES OF THE
MEDICAL MISSIONARY ASSOCIATION OF CHINA.

DEAR FRIENDS:

I have been informed that there were objections raised by members of your excellent Association to some of the advertisements of patent medicines, which have appeared in my Almanac. I am very sorry that any have appeared that have not been acceptable. I have endeavored to use great care in this matter. I have avoided taking advertisements of many and very paying patent medicines the appearance of which I feared would not be best. I have usually asked and always followed the advice of missionary or other physicians in Shanghai.

I am just as anxious as you can be that nothing objectionable shall appear in my Almanac and shall gladly remove anything of which the Medical Association may disapprove. May I ask the Association, therefore, to give me a rule to go by, or tell me what patent medicine advertisements not to take, or if that is a difficult problem, may I ask you to suggest one or two of your number (preferably in Shanghai for convenience) whom I might consult before inserting an advertisement of a patent medicine and so be reasonably sure that it would not be objectionable to the members of the Association.

The Almanac costs nearly six cents a copy and it is sold for two. The remainder must be paid for by advertisements unless I put the price up to six cents a copy, which I do not wish to do any more than you wish me to do it I know, therefore, that you will not object to the advertisement of a patent or proprietary medicine unless there is real reason why it should not appear, and not because it bears the name of "patient or proprietary medicine." But do not let the financial aspect bear heavily. Finances are important; but the purity and usefulness of the Almanac is a thousand times more important. I desire the Almanac to be beyond reproach.

Thanking you for your interest, criticisms, and assistance, may I remain,

Yours very sincerely,

H. G. C. HALLOCK,
Editor of the Chinese Christian Almanac.

Dr. Plummer said that Mr. Hallock had written to us for advice, and we ought to advise him against all patent medicines.

Dr. Gillison moved that this Association records its appreciation of the high aim which animates Dr. Hallock in the publication of his Almanac, and in answer to his letter to the Association, begs to state that the medical profession is opposed to all medicines, the formulæ of which are not published, and would recommend that he publish no medicine, the formula of which is not given. It cannot, however, take the responsibility of either recommending or disapproving of particular remedies as suitable for advertisement. Seconded by Dr. Hodge.

Dr. Park moved the appointment of a committee of three to consider the case. Seconded. Not carried; motion lost.

Dr. Gillison's motion was put and carried.

Dr. MacWillie read a paper by Dr. McCartney entitled, The Fevers of West China.

Discussion on Dr. McCartney's Paper.

Dr. Taylor, of Yangchow, said that after graduation he joined the U. S. Marine Hospital Service, and had seen a good deal of service in Central America. In no case could they find it possible to exclude the activities of anopheles. It was impossible to think that animal parasites could be gotten into the blood, having come from abnormal conditions of the soil without the intervention of some other body. As to treatment he believed that bad cases, especially those of malignant malaria, could not be treated with *quinine* by mouth. In such cases nothing was so effective as the hypodermic administration of the *bimuriate* of *quinine* and *urea*. He had seen thirty grains in two and half drams of water given every hour for

four hours in a case that was apparently hopeless; the blood showing as many as fifty parasites in each field and four parasites in some of the corpuscles. Everything must be made as aseptic as for a major operation, and the injection can be well made into the pectoral muscles.

Dr. Meadows, of Wuchou, said that at the opening of a military college in Kwangsi two years ago, after upturning of the soil, fifty out of 100 teachers and students fell ill with malaria. Nineteen of these were in the mission hospital at one time.

Dr. Taylor said that it was a well known fact that if old buildings were dug up, or leaves upturned, even during the winter, the anopheles were apt to fly out as it was in just such places that they were sure to hibernate.

The stegomyia fasciata will carry the yellow fever infection for fifty-eight days, and there is every reason to believe that the anopheles will harbor the malarial parasite for a very long time.

Dr. Hodge hesitated to criticize the paper read, because of the absence of its author. He felt, however, that it was too late to talk of the miasm theory of malaria. He is further disinclined to believe in the non-existence of typhoid in West China. It was formerly said that it did not exist in India and the same was said of Hankow when he went there, but it has been shown that it does exist. It is hard to see why it should not be there. Recently there had been a great epidemic of malignant malaria such as certaintly had not been seen for many years. Some hospital cases developed it last October, and it was thought that they must have been infected from some case that had been brought in comatose; a very few anopheles still being present at that late season. Further. malarial parasites may be hidden away in the spleen or elsewhere to come out after a chill. As to Malta fever it is a disease that needs study. A case at Kuling last year was very puzzling. The first report on the blood from the Shanghai laboratory was "Malta fever," and a second report on the same blood sent in from another place and by another physician was "Typhoid." The laboratory diagnosis of Malta fever is a very delicate thing and will not be accurate unless perfectly fresh cultures are used. There must also be great technical skill, for even experts like A. E. Wright are apt to be wrong in an opinion on this matter. "Remittent fever" is a word that ought to be far more carefully used. It should not be understood to mean malaria of necessity, for there are other remittent fevers. Now that Malta fever has come into the field, we should be very careful to call undiagnosed cases by that name, but need to study the disease faithfully.

Dr. Maxwell agreed with Dr. Hodge about the existence of typhoid, as well as with his expression about malaria. He thought that many cases of typhoid out here showed a fever curve distinctly different from what one had been accustomed to seeing at home. He asked whether Dr. Hodge could suggest lines along which the study of Malta fever could proceed. *Quinine* is sold so broadcast in Formosa that it is hard to find parasites in the blood of fever cases. The test that can be applied to remittent fever cases is that of periodicity.

Dr. Butchart said the same was true of his district as to the finding of parasites. He saw an epidemic of malaria last Fall in which there were many who could not have used *quinine*, but who got better and their prescription from the native doctors showed that cinnamon had been given. Is this a parasiticide? It would be well to investigate and see what native drugs are parasiticides. A girl under his care had remittent fever, not very high, and was not helped by large doses of *quinine*, nor by *santonin*. When *sulphur* and *rhus toxicodendron* had been given for certain areas of necrosis on the arm she promptly got well. The epidemic of malignant malaria last Fall was remarkable in the way it travelled from West to East. Sixty miles North there was none and sixty miles south there was none. Barrowmen from the North refuse to come to that territory realizing the danger. Of twelve who did come on one occasion, ten were fearfully ill. There can be no doubt that anopheles are the sole carriers of malaria. On one occasion he found anopheles under the floor of the school in January.

Dr. Kilborne wished to testify to the experience and skill of Dr. MacCartney, although he believed him to be mistaken in this paper. The only times when Chungking was free from stagnant pools was after a heavy rain, and thus there were constantly present homes for anopheles. Typhoid probably does exist in West China. Many diseases are prevalent which the foreign doctor does not see. For instance in 1902 there must have been a lot of typhus in the vicinity, though a case was never brought to the hospital. Cases of "low fever" are also seen. One little girl had it each year for three years, lasting for months together during the summer. Time alone seemed to bring cure.

Dr. Hogg called attention to the fact that malarial fever often manifested itself long after the actual infection had occurred; sailors, for example, who left the West Coast of Africa with parasites in their blood not showing symptoms till colder latitudes had been reached.

Dr. Davenport was himself in Chungking years ago, and remembered that even in February, days were often warm, and the nights very chilly, so that people, especially those whose clothes were in pawnshops, might very readily be chilled and thus render conditions more favorable for the outburst of a latent infection. Perhaps one reason why there was so little typhoid among the natives was that as they lived in so uncleanly a way, they became somewhat immunized against the disease.

Dr. McAll mentioned three points: 1. The presence of large mononuclears in the blood and of free pigment may help in the diagnosis of malaria when parasites are not to be found. 2. Dr. Stooke had long treated some cases of malaria with cinnamon alone and with good results. 3. Unless mosquito nets had been used to prevent the biting of anopheles, it could never be proved that malarial infection had been incurred without their intervention.

Dr. Taylor, of Foochow, remembered that the old Egyptians had used cinnamon in malaria with good results, and that the useful Warburg's tincture contained the drug. Typhoid fever, now known to exist in Foochow, was formerly called "sewage fever;" this term being applied to such fevers as did not react to *quinine*.

Dr. Otte's paper on the effect of opium on malaria was postponed.

Discussion of new instruments, etc.

Dr. Hume called attention to the typhoid agglutometers supplied both by Merck and by Parke, Davis & Co.

Dr. Wells said that during the first few days after breaking off opium in patients who wished to be cured of the habit, he had found it useful to give, from two to four times a day, ten drops of a solution containing *eucaine* or *cocaine*, 5 grains; *adrenalin*, 1 dram; water, 7 drams.

Inquiries were made concerning the new drug brought from Singapore, said to be so efficacious in the cure of the opium habit.

The President at this point introduced Dr. Lambeth, formerly a medical missionary in Soochow, and now Secretary of the Southern Methodist Episcopal Board in America. Dr. Lambeth suggested that at the meeting of the secretaries of all the Boards in America, occurring in January, a strong presentation should be made as to the needs of medical publication in Chinese. He thought they would be glad to approve of appropriations for this object.

Dr. Hodge made reference to four new instruments: 1. The "serres fines," small clamps designated to take the place of skin suture in clean wounds. 2. Forceps with wide jaws for deep suturing in wounds. 3. Forceps for the grasping of the peritoneum. 4. A new pile clamp.

It was decided to accept the invitation of Dr. McLeod to visit the X-ray laboratory of the General Hospital at 3 p.m. on Wednesday, April 24th.

Dr Venable moved that all members of the Association be asked to prepare annual reports of their hospital work and to send copies of the same to all other members.

On Dr. Hodge's motion, seconded by Dr. J. L. Maxwell, this proposition was laid on the table.

Dr. Park announced that over $400.00 had been subscribed towards the publication fund.

Dr. Lambeth led in prayer, and the meeting adjourned at 12.15 p.m.

Tuesday, April 23rd.

The President called the meeting to order at 9.30 a.m. Devotional exercises were conducted by Dr. Whitney. The minutes of the previous day's session were read, corrected and passed. It was arranged that the photograph of the Conference should be taken at noon.

Dr. Christie read to the meeting the twelve resolutions that have been drafted by the medical committee of the Centenary Conference for presentation to that body, and after reading them, said he was sorry they could not be made the subject of discussion by this meeting. It was moved by Dr. Evans that while not acting to give official recognition to these resolutions yet this meeting should express its strong approval of the resolutions as read by Dr. Christie. Seconded by Dr. Hart and carried unanimously. It was suggested by Dr. Hodge that at the time of reading of these resolutions mention should be made of the fact that they had the cordial approval of the Medical Missionary Conference.

The President called for the report of the Committee on Revision of the Constitution, and in response to remarks made by Drs. Hodge and Gillison, said that while

he would not rule out any reasonable remark during the discussion, he hoped there would be no needless argument.

The Revised Constitution was then read, and Dr. Beebe moved its adoption. Seconded by Dr. Grant. Dr. Hodge moved an amendment to Article IV. relating to the method of electing new members. He said that the Association had grown in spite of the old Constitution, which had long lain quiescent. Its articles and some of the By-laws were being constantly ignored. The JOURNAL was the real link. Local associations were the one great need of the C. M. M. A. in order to keep it alive. Emphasis should be laid upon decentralization and upon having members come in through their local societies. The mere possession of a diploma was not a guarantee of the training a man had received, and we ought to be willing to receive as members those whom recognized societies had been ready to appoint.

Dr. Maxwell said there was nothing in the new Constitution calling for an examination of the diploma. Dr. Beebe thought there might occasionally be a candidate from an American college of poor rank. Dr. Gillison explained some of the wording in Article IV.

Dr. Hodge's amendment was put and lost.

Drs. Jefferys, Kilborn and Weir proposed certain verbal corrections in the Constitution, which were made.

Dr. Gillison, following Dr. Hodge's suggestion about the value of local societies, moved that the words "or by the vote of local associations in affiliation with the parent society" be incorporated into Article IV. Seconded and carried. The President and Dr. Beebe thought we could adopt the Constitution now and either amend it or add an article later about the relation of local to the parent society. Local societies ought to harmonize their constitutions with that of the C. M. M. A. Dr. Hodge thought the status of the local society ought to be definitely decided and stated. He moved that the word "only" be inserted in Article IV. Seconded and carried. After remarks by Drs. Whitney, Wells and Gillison, Dr. Butchart moved that the second clause of Article II, II, b., read as follows:—"as well as by the preparation of medical literature in the Chinese language." Seconded by Dr. Whitney and carried.

Dr. Hodge moved the postponement of action adopting the Constitution till the afternoon, when we should have heard the report of the committee on the clause about the status and relationships of the local society.

Dr. Gillison feared this might re-open the whole discussion, but Dr. Davenport feared that to adopt the constitution now would prevent some action we might wish to take later. However the President agreed to rule out any discussion not hearing on this point of the status of the local society and Dr. Hodge restated his motion, which was put and carried.

On Dr. MacWillie's motion, seconded by Dr. Kilborn, the regular order of the day was taken up. Dr. Beebe read a paper on "The Evangelistic side of Medical Missions."

Discussion:—Dr. Wells added three points: 1. The need of appealing for more nurses in our hospitals. 2. The need of a Christian staff; it being better to have a Christian who was less capable than a brilliant non-Christian. 3. The value of making use of the native Christian community.

Dr Gillison made the following suggestions:—1. Show interest in the man as well as in the case. 2. Let all work be done in the spirit of tenderness and love. 3. Avoid the mere perfunctory discharge of duties. 4. Speak constantly a direct word for Christ.

Dr. Taylor, of Foochow, spoke of the importance he placed on the careful personal teaching of the Bible to his assistants and to the taking them with him as he went from bed to bed in the ward, speaking a Christian message. He told of two former medical students who were now active and prominent in the Christian life of Foochow.

Dr. Swan urged that it was a mistake to leave entirely to others the duty of doing evangelistic work; it being a thing which we ought to take upon ourselves as an individual responsibility.

Dr. Christie emphasized the importance of a Christian atmosphere in the hospital; strength for each day's work being obtained in a morning prayer service with the assistants. There is no such thing as a sacred and a secular side to this work; it is all sacred. To have an officially appointed clerical colleague attached to the hospital could not seem desirable. The native Christians themselves will some day be the great evangelizing force of China.

Dr. Hodge agreed with Dr. Christie on not drawing distinctions between evangelistic and medical work and in the matter of not having a clerical worker officially attached to the hospital. But he was unable to agree with Dr. DeVol, who

thought that we should not admit patients who threatened to weaken the Christian spirit or disturb the religious harmony of the institution. Dr. Hodge thought these to be the very ones who needed the Christian ministry of the hospital.

Doctors Butchart and Boone both told of periods of discouragement in their work when it seemed as if no definite gain were being made towards winning men and of going some distance from headquarters only to find in villages and cities in some cases persons who had received definite religious influence, and in others men who had really learned to believe in Christ and who later became centers of Christian activity and membership.

Dr. MacWillie moved that the paper of Dr. Otte on "The Effect of Opium on Malaria" be taken as read and that it be printed in the JOURNAL.

There being several papers still not read, it was agreed that it must be left to the Conference to decide which papers they would hear read. At Dr. Maxwell's suggestion it was decided to let all the papers still unread stand over till afternoon. The President reminded those who wished to contribute to the publication fund and to the fund for Conference expenses that they should act at once.

Dr. Avison led in prayer, and the meeting adjourned at 12 noon to the large hall downstairs, where a photograph of the entire Conference was taken.

Session. Tuesday Afternoon.

The President called the meeting to order at 2 o'clock.

Dr. MacWillie read the paper by Dr. Otte on "Effect of Opium on Malaria."

Discussion was postponed.

Dr. Woodward read a paper on "Mission Hospital and Dispensary Construction in China."

He also told of a Catholic Mission in Aului, where it was being planned to build a hospital costing about $300,000 (Mex.) have in it two doctors and a large number of nurses or sisters.

Dr. Avison warned those using water tanks to keep them separate from the buildiug, as sooner or later they were bound to leak. He commended the plan of having the dispensary separate from the hospital. His dispensary was in the hospital, but he was planning to have one built separate from the main building.

Dr. MacWillie read a paper by Dr. Agnes Stewart on "Gyneacological Practice in Central China."

DISCUSSION.

An answer was asked for Dr. Stewart's question.

Dr. Reifsnyder would not remove a large abdominal cyst again without first tapping. She had removed one weighing 180 lbs.

Dr. Swan averaged 5 to 7 cases a year. He never tapped. Some were multilocular and others had such a thick fluid that tapping was of no use. He further objected to the plan because of the adhesions which were so usual.

Dr. Hodge had the same experience as Dr. Swan and could not recommend tapping.

Dr. Reifsnyder told of a case of a patient who had been tapped 22 times by various physicians in 11 months without any ill effects, and when operated on, showed very slight adhesions. She used the usual trocar and canula, recommending that it be done a week or two before operation.

Dr. Maxwell said that we should distinguish between cases in which respiration was impeded and those in which respiration was free.

One must look out for the bowel when using trocar. He had never seen syncope from doing the whole operation at once, but had seen death from shock. He did not think that we could lay down a rule for the large cases.

Dr. Maxwell (Formosa) would tap before operation.

Dr. Wells had found 1 dr. of *adrenalin* in saline solution injected into the vein very useful in combating shock.

Drs. Dow and Sibree were admitted as members.

Dr. Lambeth was admitted as an honorary member.

Consideration of the Constitution was resumed.

The Committee presented the amendments to section 5.

Dr. Hodge moved, seconded by Dr. Daniel, that "any three may form a branch association." Carried.

It was agreed that Article 4 should be changed so as to harmonise with Article 5.

Dr. Beebe moved that the Constitution be adopted as a whole.

Dr. Tooker wanted the Chinese name of the Constitution to be included.

Dr. Boone moved that the question of the Chinese name be left to the Terminology Committee. Secouded by Dr. Beebe and carried.

BYLAWS.

It was moved by Dr. Hodge and carried that Robert's rules of order be substituted for "ordinary rules."

Dr. Kilborn wanted to know if Bylaw 1 meant what it said.

Dr. Beebe suggested that "may" be substituted for "shall."

Dr. Kilborne wanted "shall" to remain and have meetings triennially.

Dr. Wells moved the adoption of the Bylaws as a whole. Carried.

Dr. McAll moved that $1.00 be sent to the Treasurer by each member.. Seconded by Dr. Hodge.

Dr. Christie would be sorry to see the relations between the JOURNAL and the Association disturbed.

Dr. Gillison said that the members of the Association who did not pay their dues should be dropped.

Rev. Mr Hinman was then introduced to the meeting and told of the new drug for the cure of the opium habit.

The leaves were lance-shaped, four inches long and three quarters inch wide, glossy, not thick.

The leaves were steeped in water and a strong decoction was poured into a large bottle and mixed with the ash of opium.

As the patient continued taking the mixture the bottle was kept filled with the decoction until he was taking nothing but the drug.

The drug could be obtained from Kongsang, Seremban, Federated Malay States, for $5.00 per picul. The firm offered to send samples on application.

It was moved that the papers of Dr. Wenham on the Opsonic Index, Dr. Woodhull on "Hygiene in Native Cities," and Dr. Somerville's "Sanitation" be read by title only. Carried.

The time for closing the Conference having arrived Dr. Kilborn moved that the time for closing be extended for fifteen minutes. Carried.

The President announced the reception at the home of Dr. Boone.

It was announced that the invitation of Dr. McLeod to view the X-ray apparatus would be accepted for 3 o'clock on Wednesday afternoon.

Dr. Hodge tendered a very cordial invitation to the Association to hold their next meeting at Hankow.

Dr. Christie moved to extend a vote of thanks to Dr. Hodge for the invitation to Hankow.

Dr. Boone had always thought that it would be better to hold the meetings at various centres.

Dr Christie's motiou to hold the next meeting of the Association at Hankow was approved.

Dr. Selden reported on behalf of the committee and recommended the adoption of the resolution. Seconded by Dr. Seymour.

Dr. Maxwell moved that the Association express its opiuion, but do not memorialize the Throne. Seconded by Dr. Gillison and carried.

Dr. Beebe agreed with Dr. Maxwell, but something had to be done, as the committee had been instructed to bring in a memorial.

Dr. Christie expressed his sympathy with Dr. Maxwell's motion.

Dr. Avison supported the motion.

Dr. Machle said that the resolution brought in before had been specific, and objection had been made, and that in this resolution there were no specific conditions cited, and the complaint was that there should be conditious cited. In this matter we should not be lax in protesting as we had been in regard to the opium habit.

We should speak now, before snch great damage had been doue, and speak strongly.

An extension of time was moved and seconded.

Dr. Hart moved that an extraordinary meeting of the Association be held to-morrow morning.

Dr. Hodge moved that Dr. Maxwell's motion be now taken. This was carried.

Dr. Maxwell's motion was carried.

Dr. Christie moved that the meeting be adjourned until to-morrow for the reading of the minutes.

It was agreed to adjourn for unfinished business.

Report of the Committee on Alcoholics as finally amended.

We, the members of the Medical Missionary Association of China, viewing with much satisfaction the efforts of the Chinese Government to free its subjects from the bonds of the opium vice, and hoping she will accomplish all she undertakes for the good of the nation, wish to put ourselves on record in regard to another evil, still in its infancy, but which in time will be a menace to good government and the best interests of the people.

We view with alarm the growing tendency to indulge in alcoholic beverages, the trend of which is to bring upon the consumer a chain of diseases of most disastrous character and upon the family and community misery and want. The use of alcoholic stimulants is growing rapidly and types of true alcoholic insanity are being treated by members of this medical association.

Fearing that China with her many millions will suffer from this curse, we hope the government will take radical measures at an early date for the suppression of this growing evil.

Morning Session (second part). Wednesday.

The President appointed the following to compose the Committee on Temperance Literature; Drs. Seymour, Hamilton and Machle.

Dr. Cousland proposed Dr. Andrew White, M.B., Ch.B., Edin., English Presbyterian Church, Chaochowfu, as a member of the Association. Carried.

Dr. Gillison moved a vote of thanks to the Chairman and the Secretaries. Carried.

Dr. Cousland announced that the required sum of $65.00 for the expenses of the meeting had been handed in.

The minutes of the Tuesday meeting were read, corrected and approved.

The President suggested that the following change be made in the accepted Constitution: Article 3, sections 2 and 3. The words "Honorary Members" and "Corresponding Members" be interchanged. Dr. MacWillie seconded the President's suggestion. Carried.

Dr. Christie moved, seconded by Dr. Gillison, that Sir Alexander Russell Simpson be accepted as an "Honorary" member. Carried.

Dr. Christie expressed regret that the preparation which Mr. Hinman had brought before the Conference, for the cure of opium habit, contained opium. He asked that the Research Committee be instructed to consider the matter.

Dr. Avison did not agree with the policy of doing nothing; we should know what the drug contained.

The President read a report from Mr. Holmes on the drug.

Dr. Maxwell protested against this going to the Research Committee.

The committee was not formed to consider such matters.

Dr. Butchart said that Park Davis & Co. would be glad to examine the drug for us.

The President thought that the Research Committee could consider this matter.

This was approved.

The Conference adjourned, after a short speech by the President, at 12.30.

Cordial sentiments of appreciation of Dr. Davenport's successful plans and labors for the Conference were very generally expressed.

Medical and Surgical Progress.

Progress in Internal Medicine.

Under the charge of E. H. HUME, M.D.

Judging from persoual experience, it will be most profitahle to the readers of the JOURNAL to have the reviews in this department each time all hear on some one large topic. In this way it is more probable that the medical mau will find some one review in the issue that will he of help iu solviug his own problems; and it will be easier to refer to these reviews if each issue deals hroadly with hut one subject. The suhject for the present issue is Tuberculosis. We meet with it in so many diverse forms out here, and its manifestations are so constantly hopeless that real light on diagnosis and treatment will he welcome to each one.

Pretubercular Conditions and the Treatment of Associated Anemia by Hypodermic Injections of Iron and Arsenic.

Shurly (*Journal of the American Medical Association*, June 16th, 1906, page 1,833) pleads for more euthusiasm iu attention to so-called pretuberculous and early tuhercuious conditions. (In this condition it may he allowable to call attentiou again to the fact that confusion in terminology would he most easily avoided if strict ohservation of the priuciples of uomenclature were our rule, viz., the word "tuhercular" meaus "resembling a tuhercle" and may apply to any condition where the form of the object resembles a tuhercle, thus, we may correctly speak of a "tuhercular syphilide." The term "tuherculous" should always be used, and used exclusively for couditious caused hy the hacillus of tuherculosis. We should therefore say "tuherculous pneumonia" and "tuherculous meuingitis" if we mean a condition due to the action of the tuhercle bacillus.—ED.). Following the lead of Loomis, he classifies as follows all phenomeua that predispose or lead up to the actual demonstration of incipient phthisis.

1. Corpulence, viz, the relation of the hody weight in pounds to height in feet.

2. Chest conditions. — A. Conforuation of the chest. B. Chest measurements. C. Vital capacity.

3. Constitutional conditions.—A. Lymphatism. B. Digestive disturhances. C. Chloro-anemia.

4. Character of pulse.

1. "Corpulence" is a term taken from French observers, and is used to express mathematically any departure from a standard of ratio hetween weight aud height. According to the military tables a man at height five feet eight inches should weigh 150 lbs., having an average *corpulence* of 26.47 (weight divided hy height). It is seen that it is not only importaut to recoguize progressive loss of weight without a demonstrable cause as a very coustant symptom of onsetting phthisis, hut a study of the weight chart should he made in order to give one definite data for the makiug of an early diagnosis of tuherculosis. Accurate scales and measurements of height in this class of patieuts are much more necessary than is generally admitted. A record is as valuable in determiuing the uutrition of tuberculosis as the weight

chart is in infant feeding. Many thousands of military observations have established a normal standard of corpulence for men as twenty-six, while women should have a normal of twenty-three. A corpulence of twenty-one is considered abnormally thin. Associated with loss of weight is the prominent symptom of general malaise. Will power is substituted for natural automatic power. There is increasing motor debility with complaints of being "sawed off in the legs" or of weakness in the knees. Sensations become abnormally accentuated or dulled; sleep, broken or profound; digestion, changeable; respiration, superficial and slightly hurried; rate, twenty-two to twenty-four. Many cases show acceleration of the heart with a relative falling of arterial pressure. The chest may now be examined and nothing definite determined, calling, therefore, for still further attention to other danger signals.

2. Conformations that ought to arouse suspicion are familiar enough; the lean, hollow chest, with marked subclavicular depressions, prominent spaces between the ribs, projecting scapulæ, and decided diminution of the antero-posterior diameter. Still more valuable evidence may be obtained by scientific measurement of a chest, taken as follows: Two ordinary measuring tapes are sewed together and the point of juncture rests in the center of the spine. In men, measure at nipple level; in women, at the level of the ensiform cartilage. The double tape aids in measuring the difference in expansion between right and left sides, as well as the total chest mobility. The right is usually at least half inch larger, although both lungs should show almost equal expansion. A circular measurement below thirty-five inches is abnormal. The average of measurement taken at the end of forced expiration and at the moment of forced inspiration is defined as the *thoracic perimeter*. The "vigor of constitution" is the relation between the perimeter and the height. *The thoracic perimeter of a person*, according to the French, *should never be lower than one-half the height*. The question of "vital capacity" is important, but the deductions are subject to error, as much depends on the previous education of the patient and the physician's experience with the spirometer. Important data may be obtained, however, when the respiratory capacity is considered in relation to age, weight and particularly height. *The relation in inches between the height and the lung capacity should be one to three in men.* Thus, a man of five ft. eight in. (sixty-eight in.) should have a capacity not under 204 cubic inches. In women the relation should be one to two and six-tenths. The inter-relation of corpulence, thoracic perimeter, and vital capacity should be considered valuable aids to a determination of genuine predisposition to pulmonary tuberculosis.

3. Constitutional conditions. In some individuals lymphatism, shown as pathologic adenoids, tonsils interfering with naso-pharyngeal drainage, constitutes a pretuberculous condition. Such glandular hypertrophy may become a seat of tuberculous infection. In still others there is a genuine relation between indigestion and a vulnerability to tubercle bacilli. Chloro-anemias bear a special relation to the development of phthisis. In cases of imperfect chest development there are constantly present anemic blood changes. This is a danger signal, especially in men of tuberculous age. Blood examinations in the pretuberculous stage all

show a diminution of hemoglobin out of all proportion to the loss in red cells. If chlorosis were often considered the initial evidence of slumbering tuberculosis, proper treatment would produce complete recovery. The treatment found most successful in the writer's hands has been the hypodermic use of *iron* and *arsenic*. If *iron* is used it may be given as the green ammonio-citrate, while *arsenic* can be given as the *arsenate of soda* or of *iron*. The injections are given deeply into the muscles of the back. There is almost no pain attending the procedure, and in suitable cases the general feeling of well being which follows the proper dosage is enough to commend it. After an initial blood examination injections may be given daily. An increase of five to ten per cent. may be expected weekly in the hemoglobin. The green *ammonio-citrate* may be given in doses of .05 to 0.1 gram (¾ to 1½ grain), while *sodium arsenate* is given in doses of .001 to .002 gram (1/60 to 1/30 grain), beginning with the smaller dosage. By this method a full dose of *iron* produces a reaction in five minutes. A feeling of tension in the head is experienced, the face flushes and tingling sensations are noticed. There may be waves of nausea or sudden vomiting if larger doses of arsenic than .002 gram are administered. A full dose gives a sensation of warmth and glow all over the body, the pulse quickens, and there is a general feeling of well-being. The hypodermic method avoids all injury to the teeth and upsetting of the stomach and constipation is not produced. In cases of fever and active hemorrhage, this method is contraindicated.

4. Character of Pulse. Two features are noted. One is the relative feebleness of arterial pressure; the normal arterial pressure of fifteen to eighteen being found often reduced to thirteen and even to ten. This pulse of lowered pressure is always tense and hurried, 100 to 120.

Treatment of Tuberculous Laryngitis with Tuberculin.

Pottenger (*American Journal of the Medical Society*, December, 1906, page 906) draws attention to the fact that by a conservative estimate one-third to one-half of those who have pulmonary tuberculosis have the larynx affected. Further, such laryngitis has been considered almost a hopeless condition by nearly all throat specialists; the best results prior to 1903 being 20.85 per cent. of cures (Lake). In contrast to such results are those of von Ruck, who obtained a disappearance of all signs or a condition no longer reacting to tuberculin in 353 cases or 82.86 per cent. of 426 cases treated. The writer himself reports apparent cure in eleven of fifteen cases, giving details. He urges that in seeking early diagnosis of tuberculosis one should not be content to examine the chest, but should always search the larynx as well. His cases were treated with von Ruck's watery extract of tubercle bacilli (made from the powdered bodies of the bacilli by extraction with distilled water after the culture fluid has been removed by washing and the fats with alcohol and ether. Tuberculin not only increases the power of the blood to destroy bacilli, but stimulates the tuberculous focus and hastens healing. Following an injection of the proper dose, a slight hyperemia of the area involved occurs, which passes off within a few hours or days.

The dosage can be controlled by a daily watching of the local reaction produced, only enough being given to produce a slight reaction, and no second dose being given till all reaction from the first has dis-

appeared. The chances of recovery by this method are increased from fifty to seventy-five per cent. In addition all measures for increasing nutrition should be used and the local lesion kept clean by suitable sprays. For ulcerations *protargol* ten per cent. is suggested, adding *orthoform* as a dusting powder if there be pain. For excessive pain, with troublesome coughing, *heroin* may be added to the *orthoform*.

Treatment of Tuberculous Meningitis.

Riebeld (*Munchener medizinische wochenschrift*, quoted in the *Practitioner*, December, 1906, page 906) draws attention to the fact that till recently this disease was looked on as absolutely fatal; only four certain cases of cure having been reported in twelve years. The old methods of treatment, such as local bleeding, inunction with grey ointment, administration of *creosote* or *potassium iodide* have hardly any effect at all on the course of the disease. The actual seat of the disease can only be reached by lumbar puncture, or trephining. It is not likely, however, that one, or even several punctures, can produce any appreciable effect upon the disease. Theoretically if the inflammation is not too extensive or too intense, repeated lumbar punctures are able to keep the intra-cranial pressure down to a low level, and thus to prolong or save life. In the writer's case the diagnosis was established by the finding of thirty tubercle bacilli in a small fibrinous flake from the fluid obtained by puncture and the patient completely recovered after twenty-four punctures in eighteen days, by which 574 c.c. of cerebro-spinal fluid had been withdrawn. Guinea-pigs inoculated with this fluid developed tuberculous affections. The influence of the punctures on the course of the disease was very definite. After one of them, the condition, which had been very threatening, improved very distinctly and led on to actual recovery. The daily punctures doubtless relieved the cerebral ventricles of excessive pressure. It must not be forgotten that the cerebro-spinal fluid is reproduced with surprising quickness. So long as the pressure exceeded twenty-five to thirty cm. of water, and still remained at ten to twelve cm. after withdrawal of twenty-five to thirty c.c. of fluid, it was necessary to puncture every day. It is also necessary to take note of the patient's general condition, of symptoms of compression, headache, etc. As soon as the fever disappeared and the albumen in the fluid got less, it was possible to look forward to the decrease of the inflammatory exudation and the punctures could then be made at longer intervals.

Local Sanatoria for the Treatment of Pulmonary Tuberculosis.

Seeing the great mass of persons in China infected with tuberculosis is apt to discourage the average physician as to the possibility of ever doing anything definite toward the grappling of the great problem of treatment along lines similar to those now in use in Western lands. And yet the same methods must surely be tried here, and recent experiences in India show that an Oriental climate is no real stumbling block in the way of true cure. Recent letters from Western India refer to permanent cures in cases that in the ordinary course of things would have died very soon for lack of attention. Nearly every journal dealing with the problem of tuberculosis calls attention to the fact that what is needed is not so much distant sanatoria where

sick persous of wealth can be sent and cured, but places near at hand to every center, where even the poor can be properly cared for and where the thorough régime of the larger sanatorium can be maintained. Lyman emphasizes this (*Johns Hopkins Hosp. Bulletin*, November, 1906, page 361) saying that patients must be divided into two classes—the favorable and the far advanced—whose distinctive needs demand that they be cared for in absolutely separate institutions. Almost the greatest need in large cities is that of institutions where far-advanced cases cau be given proper care. Dispensaries can only do a very limited work, even if the staff be able to visit the afflicted in their homes to help and instruct. It is in the early cases, however, that the distinct advantages of local sanatoria are seen. Their advantages, are all derived from the simple fact of accessibility. It is easier to persuade a patient to go there. A difference of a week or two in the commencement of the treatment may mean a month or two in the time needed for the arrest of the disease. Further, the expense would be far less, and the comfort of seeing family and friends adds much to the advantage over the distant sanatorium. The nearness of the friends has a further advantage, in that they are able to see the sane and simple working of the institution and are the better able to do for the patient when he has to return home. This is all the more important when one takes into consideration the definition of a "cured" case adopted hy the Nomenclature Committee of the U. S. National Society for the Prevention of Tuherculosis, viz., "All consitutional symptoms and expectorations with bacilli absent for two years under ordinary conditions of life." A patient returuing from a distant climate has to go through a far greater readjustment to his home conditions than the man who has gone across the river or to a neighboring hill to the institution where he is to receive treatment. Lyman does not wish to be understood as discounting the beneficial effects of climate, but he holds that for the average patient treatment in local institutions possesses advantages that more than offset those derived from a change of climate.

It is not an idle dream that some day we shall see just such sanatoria springing up near the great cities of China and near many of the smaller places as well. Has not each member of this Association in mind some near-by place which would be exactly adapted to the erection of such an institution? It must be that he has. We cannot go on always admitting cases of advanced tuberculosis to our general wards and being satisfied with administration of tonics and mixtures for the reduction of fever. Upon each physician in charge of a hospital lies the responsibility never to feel satisfied till he has commenced, even iu a small way, the local sanatorium treatment of tuberculous patieuts.

In connection with the review of Shurly's article ahove, it may not be out of place to suggest a general study of the standards of *Corpulence*, *Thoracic Perimeter*, and as far as possible, of *Respiratory Capacity* for Chinese subjects. Those who are not disposed to collate such measurements for themselves, but are willing to pass their ohservations on to another for comparison and study, will confer a favor on the Editor of this department if collected ohservations could be forwarded, as convenient to him, at Changsha, Hunan.

Progress in Pathology.

Under the charge of JAMES L. MAXWELL, M.D.

The editor of the *Journal of Tropical Medicine* commenting on a paper by Dr. Robert Sinclair Black, Government Medical Officer, Cape Colony, in the *Lancet*, October 20, 1906, describes the paper as the most important coutribution to the pathology of leprosy since the discovery of the bacillus lepræ. Dr. Black observes :—

(1). That rhinitis is a prominent feature of almost all (or probably all) cases of leprosy in the early stages.

(2). The bacillus lepræ is met with in the nasal secretion of lepers in almost all (or possibly all) early cases.

(3). In mixed and nodular cases the uasal secretion is excessive, and the bacilli present in numbers in the secretion.

(4). In maculo-anæsthetic cases the nasal secretion is slight and the bacilli few or absent.

(5). In some mixed and nodular cases, when the nose had fallen in, copious nasal secretion lessened and the disease became practically of the mild form attendant upon maculo anæsthetic leprosy.

He concludes from these observations :—

(1). That the maculo-anæsthetic is a mild form of leprosy attended hy an early manifestation of a nasal ulcer, with some nasal secretion, in which the B. lepræ is present, but from which the bacillus disappears in time, owing to the nasal ulcer healing and the nasal secretion lessening or wholly drying up.

(2). That mixed or nodular leprosy is attended by extensive ulceration and a growth of granulation tissue in the nasal mucous membrane extending from thence into the naso-pharynx and to the cavities which communicate with the nose, thereby leading to distortion of the features. The nasal secretion in such cases is copious and charged with large numbers of the B. lepræ.

I think, writes Dr. Black, that there can be hardly any doubt that leprosy in its early stages begins as a small ulcer on some part of the extensive nasal mucous membrane. We know quite well from our clinical experience of the disease that leprous ulcers in favourable circumstances tend to heal. There can therefore be little doubt that a person can suffer from a leprous ulcer in the nose that may heal and pass away entirely. This is the explanation of the maculo-anæsthetic cases. They have had uasal ulceration which has passed away ; in some cases perhaps leaving a cicatricial shrinking of the nasal septum, but during the time the ulcer existed leucocytes or white connective tissue corpuscles got detached from the ulcerating spot and along with the bacilli which they were attempting to devour were carried by the blood stream and lodged in various situations in the peripheral nerves, where they got eutaugled, and the bacilli then proceeded to grow, causing pressure on the fine nerve fibrils and consequently setting up nutritive changes in the skin which these axis-cylinders supplied, thus causing the patches of discolouration and anæsthesia.

In the nodular and mixed cases the progress of the disease is quite different. Instead of the nasal ulcer healing up it proceeds to grow apace, causing extensive destruction of the nasal mucous membrane, causing

it to swell up aud ultimately attacking the nasal bones themselves.

There is no reason why the festering nasal sore, which is the real cause of the complaint, should not be attacked by curettiug, by nasal douches and by other means, so that the source of iufection may be done away with, or the potency of the infection diminished.

Under the heading of—*A study of the influence exerted by a variety of physical and chemical forces on the virulence of Carcinoma in mice*—there appears a paper by G. H. A. Cloves, Ph.D., in the *British Medical Journal* of December 1st, 1906. We recommend a careful study of this most interesting paper to all anxious to keep abreast with the rapid progress of cancer investigation. We have only room here to quote the summary and conclusions given at the close of the original paper. They read as follows :—

From the above experimeuts, in which over 7,000 mice have been employed, it may be concluded that :—

(1). Primary tumours are only transplauted with great difficulty ; after the first generation the yield of tumours gradually increases until a maximum virulence is attained, which subsequently remaius fairly constant for a considerable period of time.

(2). Increase in virulence of a tumour strain is invariably associated with an increased rate of growth in the iudividual tumours.

(3). The proportion of tumour mice recovering spontaneously in any series is apparently inversely proportional to the virulence and speed of development of the tumours of that series.

(4). The larger the dimenions actually reached by a tumour the smaller are the chauces that it will recover spontaneously.

(5). Incubation of tumours possessed of a low grade of virulence, previous to injection into mice, is found to exert a stimulating effect ; larger yield of tumours being obtained than in control series.

(6). The resistauce of tumour cells to *mercuric chloride* and other inorgaic disinfectants is very high. It was fouud possible, for example, to destroy the bacteria present in badly infected tumours by means of *potassium cyanide* without seriously affecting the virulence of the tumour on subsequent transplantation.

(7). The chemical analysis of over 300 tumours shows a relatively high potassium and nucleoproteid content, associated with high viruleuce and rapid development, and a low potassium and high calcium content associated with low virulence and relatively slow development.

(8). The principal evidence of the existence of immunity against cancer is as follows :—Spontaneous recovery of mice from true tumours actually occurs. Those mice which have recovered are not reinoculable with tumour materials possessed of the same degree of virulence as that previously employed, and exhibit in addition a considerable immunity to subsequent injections of far more virulent strains. The reinoculation of mice which have failed to develop fatal tumours shows in our experience a great reduction in the proportion of tumours, and inoculation for a third time has so far failed to be productive of a single tumour. The serum of recovered mice appareutly exerts a definite though slight effect on the small tumours in other mice wheu injected directly, and also on tumour materials when admixed previous to inoculation. Mice on which tumours are already developiug are, with a few exceptions, immune to subsequent injections, even with a more virulent tumour, iudicating the production of immune forces in the serum antagouistic to the development of caucer.

(9). The injection of tumour materials incubated at such temperatures as to render development impossible, or of tumour materials previously treated with chemicals at such a concentration as to inhibit development, fails entirely to confer immunity on the mice so treated.

(10). The treatment of mice with increasing doses of nucleo-proteids (extracted from the most virulent tumours) at stated intervals of time has so far failed to confer an immunity.

(11). The process of immunizing mice against cancer appears to be analogous to that of vaccination against small-pox; the animals recovering from an attenuated form of the disease developing an immunity capable of protecting them in the large majority of cases against injectious of a more virulent cancer strain than that originally employed.

Correspondence.

To the Editor of

"THE CHINA MEDICAL JOURNAL."

DEAR DR. JEFFERYS: Enclosed please find the statement referred to to-day. (I had nothing to do with its being issued and was greatly surprised when I saw it was being given out at the door).

I think that one sentence will do. I did feel exceedingly chagrined; for, without any name added, it must have looked to many as if the superintendent had issued it in praise of himself, which is exceedingly distasteful to the latter.

Yours sincerely,

CHAS. C. SELDEN.

NOTE.—The circular alluded to, which was distributed at the General Missionary Conference in Shanghai, is not so bad as Dr. Selden makes it, but we extend him our sympathy nevertheless and heartily agree with him in a general dislike of public incense-wafting among fellow-workers.—EDITORS.

SHANGHAI, May 8th, 1907.

To the Editor of

"THE CHINA MEDICAL JOURNAL."

DEAR DR. JEFFERYS: I send you four pieces of plate glass that I think make good warm stages for examining for amœba coli. I found that by placing one of these in water as hot as the hand can comfortably bear, drying it and placing on the microscope stage, a first class warm stage is secured. I had no trouble getting movement in the amœbæ after adopting this simple plan. The glass represents our shattered hopes for a surgery skylight but I hope it may serve another useful purpose.

Keep one for yourself and give one to Dr. Davenport and the others to anybody you like.

Yours sincerely,

O. T. LOGAN.

March 27th, 1907.

To the Editor of

"THE CHINA MEDICAL JOURNAL."

DEAR DR. JEFFERYS: Thank you so much for your kind letter, received last spring, announcing my membership of the China Medical Missionary Association. I write my home report in Norwegian and haven't time to translate it, so I only send you the statistics of our hospital for the year ending Decem-

ber, 1906. A copy of the same has already been sent to Dr. Davenport. 1906 is our third full year of work; our hospital being opened late in the fall of 1903, and we are very glad to be able to report steady if not very rapid increase in the number of patients and their willinguess to pay the charges. Changsha seems to be the hotbed of tuberculosis in all forms and stages. Comparatively little malaria is met with.

I can easily divide my dispensary patients in three chief groups as suffering from tuberculosis, syphilis and rabies with a sprinkling of other ailments in between. The arrival in the early spring of a foreign nurse has done much to increase the usefulness of our work. Thus she was able by massage to restore to a governor's grandson the use of his foot, after he for months had had to be carried about on account of a severe sprain of the ankle.

We find that we obtain our most "wonderful" (in the eyes of the Chinese) results by the simplest means. Thus a case of cellulitis from a very badly neglected ulcer of the leg, the infection showing markedly a good way above the knee, was cured by keeping the whole infected leg day by day in a strong bichloride solution; a simple vessel being made for the purpose. But I must not begin to cite cases.

The JOURNAL is more and more becoming a valued friend.

Sincerely yours,

RAGNHILD B. GOTTEBERG, M.D.

CHANGSHA, 19th February, 1907.

Personal Record.

BIRTHS.

BOOTH.—On April 19th, at W. M. S., Hankow, the wife of Rev. Dr. R. T. BOOTH, of a daughter, "Eileen Edith."

JEFFERYS.—On March 23rd, at Shanghai, to Dr. and Mrs. W. H. JEFFERYS, a daughter, "Adelaide McCulloh."

MEDICAL MISSION STATISTICS. 1906.

Name of Hospital.	Mission.	Location—City and Province.	Medical Missionaries.	Chinese Assistants. M.	Chinese Assistants. F.	Medical Students. M.	Medical Students. F.	Beds.	Patients. In-patients. M.	Patients. In-patients. F.	Patients. Dispensary—New. M.	Patients. Dispensary—New. F.	Patients. Dispensary Return. M.	Patients. Dispensary Return. F.	Patients. Out-calls. M.	Patients. Out-calls. F.	Patients. Itinerating. M.	Patients. Itinerating. F.	Patients. Total	Surgical Operations. General. With Anæsthetic	Surgical Operations. General. Without Anæsthetic	Surgical Operations. Eye.	Surgical Operations. Gynæcol.	Surgical Operations. Obstetrical.	Surgical Operations. Dental.	Surgical Operations. Total.	Charges for Dispensary Patients.	Charges for Medicines.	Charges for In-patients.	Charges for Out-calls.	Income from Fees and Charges.	Income from Sales.	Income from Contributions. Native.	Income from Contributions. Foreign.	Total Income on the Field.	Total Annual Expenses.	Home Support.
*Tungchow	American Board	North Tungchow, Chihli	Ingram	3	1	1		40	103	17	1,672	576	8,697	4,017	5	12	200	602	15,781	120	40	...	...	...	120	20 cash a visit	...	1,000 cash	1,000 cash	.....	.....		$300	1,136	2,136	$1 000
Women's and Children's	"	Foochow, Fukien Pagoda	Woodhull, Stryker		1	8	24		170		3 851		5.926		254		371		.....	40		...	...	...	...	30 cash	.....	10 admission	$2·5	$144	14	—	20	909	1,822	899
Jangseng	"	Anchorage, Fukien	Whitney	...	...	...	...	...	.....		.....		.....		.....		.....		.....	...	...	...	...	...	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Williams		Pangchuang Shantung	F. F. and Emma Tucker	2		1	1	80	343	176	2,812	703	1 406	351	19	12	78	23	5,923	94	141	98	3	4	64	404	25 cash	in quantity	No	Ask contribution	154	36	367	200	757	2,775	2 115
*Shaowu	"	Shaowu Fukien	Bliss	...	3			20	69		3,128		4,843		350		.....		8,289	66	9	...	...	35	110	.....	Yes	Board	Chair and medicines	77	460	.....	.....	537	837	320
St. Luke's	American Church	Shanghai, Kiangsu	Boone, Jeffreys	9	1	11		100	1,194	10	.....		31,713		200		286		32,833	500	...	...	...	...	1,396	50-30 cash	a few	15 cent-$3	$10	1,139	.....	1,675	2,705	14,000	11,000	G. 1,000
St. James'	"	Anhuei Nanzkm, Anhuei	Woodward, Taylor	3	1	4		30	345	57	9,230		7-543		85		321		17,581	418	...	...	...	200	618	40 cash, return 20	a few	$1 for ten days	day $5, night $10	2,000	.....	.....		2,131	2,505	G. 1,100
Amoy Community	Unconnected	Amoy, Fukien	Tribe	...	...	...	...	...	.....		.....		.....		.....		.....		.....	...	...	...	...	...	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. John's Dispensary	American Church	Jessfield, Shanghai	Lincoln	...	...	...	...	...	.....		.....		.....		.....		.....		.....	...	...	...	...	...	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kiehyang	American Baptist	Kiehyang, Kwangtung	Bixby	2	1	2		30		1,248		2,895		4,490		82		.....	8,715	7	132	173	...	8	138	458	No	some	Food	$1·2	55	497	.....		551	1,350	300
E. P. Scott Memorial M. Martha Thresher F.	"	Swatow Kwangtung	Worley	3		...		75	507		1,949		10,067		75		.....		17,508	52	173	42	...	5	48	225	No	Yes	Opium $1	Some times	160	400	52	403	567	1 369	1,000
Hanyang	"	Hanyang, Hupeh	Huntley	3		3	1	50	.....		1,589	566	3,905	1 035	354		.....		7,449	191		20	...	3	49	263	40 cash for 2 weeks	1 500 cash for cereal	100 cash	$3	150	42		136	328	828	500
Tsouping	English Baptist	Tsouping, Shantung	Patterson	2		...		...	82	33	4,097	3,047	1 769	978	.....		.....		.....	113		...	...	...	...	...	No	No	No	No	.....		£12	£9	£1	.....	£ 166	£ 150
Basel	Basel	Kiayingchow Kwangtung	Wittenberg	2		2		40	225	145	5.217		11,116		34		.....		16,747	54	327	59	8	4	316	768	No	Yes	Yes	Yes	1,398	.....		133	1,500	2,308	808
Chucheo	Foreign Christian	Chucheo, Anhuei	Osgood	...	...	...	...	...	.....		.....		.....		...		.....		.....	.....		...	...	...	...	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
*C. I. Mission Hospital	China Inland Mission	Chinkiang, Kiangsu	Cox	1		5		...	100	6	6,000	2,000	4,000	2,950	250	150	.....		15,465	283		30	...	...	500	813	O. P. days, 68c., 50 cents at other times	No	$2·50	$1	1,600	.....	150	450	2,200	1,800	452
Jaocheofu	"	Jaocheofu, Kiangsi	Judd	...	2	...		...	.....		699	273	1 029	314	...	5	295		2,665	7	46	31	...	...	41	118	30 cash	.....	.....	$1	.....	.....	.....		.....	.....	.....
Hinghwa	Church Miss. Society Friends Mission	Hinghwa, Fukien Tungchwan Szechuan	Taylor, Sanger Harr s	4		8		160	1,468		7.766		4,153		200		.....		.....	...		...	...	...	...	...	M 30 cash W. 25	Yes	M 30 cents W 20 ,,	$1.	980	.....	32		.....	1,920	710
		Luhhoh, Anhuei	George and De Vol	...	...	...	...	...	.....		.....		.....		...		.....		.....	.....		...	...	...	...	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
*Roberts Memorial Mat's Hospital	London Mission	Tsangchow, Chihli	Peill	4	2	12		80	293	122	2 327	727	4 209	925	.....		.....		8,623	312		272	1	...	...	585	50 cash	.....	1 000 cash a month	.....	Tls. 356	Tls. 69	Tls 234	Tls. 1 280	Tls. 836	Tls. 3 497	Tls. 2,531
Blyth M. E.	Free Methodist	Wenchow, Chehkiang	Plummer	8		1		80	701	222	.....		.....		...		.....		12,285	304	17	...	...	...	...	321	40 cash	.....	$1 a week	$5	2,092	1,354	318	1,708	5.5'2	5.370	.....
General Mem's	Methodist Episcopal	Chungking, Szechuan	MacCartney	12		...		100	722		15,283		.....		538		1,235		17,778	310	545	82	15	30	176	885	20 cash	Nil	800 cash a day	$1·3	4 500	12,000	1,200	1,500	19,000	5,500	.....
Wuhu General		Wuhu Anhuei	Hart	1		6	3	70	348	61	2 929	654	4.072		713		.....		8,847	134	163	31	15	16	4	363	100 cash	.....	100 cash	$5 10	6,050	1,138	172	3 047	12,498	12,500	150
Women's and Children's		Taianfu, Shantung	Benn	...		1	24	4	24		570		1 834		8	35	105		2 655	21		25	1	3	10	60	50 cash	No	1,000 cash	Yes	73	.....	Tls. 2,000	$13	G. $4,407	Tls. 1,000	G. 275
Soochow	South	Soochow, Kiangsu	Park, Fearn	3		3		50	451	21	11,246	1,059	5'630	220	550		.....		19,160	64	231	17	...	3	...	304	28, 56 and $1	Yes	15 30 cents	$5	6,876	318	4 560	127	19,734	17,000	G. 25
Women's and Children's	Methodist Episcopal	Chinkiang, Kiangsu	Doag, Taft		3	...		22		204		2,811		2,367		125		.....	5,303	.....		...	...	...	...	30 cash	Yes	80 cash	$5 and 1 return	.....	.....	.....		1.160	2,071	911
*E. S. Dunforth Memorial		Kinkiang, Kiangsi	Stone		6	...		24		207		5 561		7,224		425		.....	13.417	.....		...	...	...	...	53	100 cash	Yes	$4·8 a month	Yes	1,193	452	579	82	3,108	5,127	2,010
Forman Memorial	American Presbyterian North	Yeungkong, Kwangtung	Hobson	...	...	...	...	...	.....		.....		.....		...		.....		.....	.....		...	...	...	...	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Men's	"	Lenchow, Kwangtung	Machle	...	...	...	...	...	.....		.....		.....		.....		.....		.....	.....		...	...	...	...	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Women's	"	"		...	...	...	...	...	.....		.....		.....		.....		.....		.....	.....		...	...	...	...	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lonsia Y. Boyd	"	Chinanfu, Shantung	Burnham	...	...	...	...	...	.....		.....		.....		.....		.....		.....	.....		...	...	...	...	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
McIlvaine Tooker Memorial	"	Soochow, Kiangsu	Neal, Cattell, Fitch	2	1	9		35	181	39	3.033	1,600	3 704	1,313	...	...	...	...	10 083	215		86	...	...	52	353	No	Yes	No	No	256	520	761	154	1,691	1,690	.....
Hwaiyuen	"	Huairou, Anhuei	Coehran		4		2	25		100		1,989		3.749		71		.....	5.922	7	156	...	16	4	41	...	30 cash	.....	10 cents	$5 and up	537	64	22		627	2 332	1,705
*Presbyterian		Shaoyan, Anhuei	Vanderburgh	3		1		10	63		1,071		3.905		113		.....		5,052	62	6	167	...	1	...	236	Scash for 5 visits	a few	Expenses	Tls. 2	171	100	291		516	1,779	1,474
Kashing	South English Presbyterian	Kashing, Chehkiang	Venable, Lee	1		1		5	55		1,637		.....		147		.....		1,704	51		...	...	...	...	57	.....	Yes	300-1,000 cash	No	.....	.....	.....		.....	800	.....
Taiuan		Taiuan, Formosa	Maxwell	2		2		35	122	62	4,053		4,223		162		.....		8,627	95		31	...	...	735	1,375	25 cash	Yes	100 cash	$3	.....	.....	.....		1,800	2,600	800
*Engchun		Engchun, Fukien	P. Maxwell	7		...		160	1,634	520	2,320	1,532	8,818		40	39	160		15 063	340	823	397	12	5	102	1 153	5 cents	No	8 cents	Y. 1	....	.....	.....		Y. 3.753	Y. 3.748	.....
Burns Memorial		Chaochowfu, Kwangtung	Whyte	7		8		50	456	61	1,001	195	2,900		45	46	780		.....		132		87	9	...	143	371	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Chianghoa	"	Chianghoa, Formosa	Landsborough	1		8		92	535	189	2,558	992	8,024		124	39	476		12.794	130	52	58	...	15	97	352	No	No	70-100 cash	$1 up	434	1,216	113	372	2,304	3,717	1,100
Huaiching	Canada	Huaiching, Honan	Rev. J. Menzies	5		...		50	394	148	5.818	1,881	9,870		40	46	124	107	18 420	194	281	435	...	12	77	1,002	No, up to 100	No	No	No	Y. 1,050	Y. 56	Y. 24	Y. 2	Y 1,133	Y. 2,159	Y. 1,010
*Huchow	A. B. M. U.	Huchow, Chehkiang	M. D. Rinbank	2		...		20		145		6,100		.....		41	200		6.344	58		33	...	1	...	92	28 cash	Yes	$1 and food	$3	816	187	500	36	1,503	1,956	846
Yang-how	A. S. Baptist	Yangchow Kiangsu	F. S. Evans		1	1		...	.....		962	452	2,624		40		.....		4,078	7	81	...	...	...	42	130	80 cash for 3 visits	.....	.....	.....	150	117	77		44	767	G. 250
*Laoling	English Methodist	Laoting, Shantung	Fletcher Jones	4	1	1		42	140	44	3.279		1.775		...		102		5.340	78		33	...	...	...	111	50 cash	Women's Ven. cases	1,000 cash	1,000 cash	2,855.00 cash	.....	30.500 cash	Tls. 1,000	.....	Tls. 1.540	.....
St. Luke's	Church	Changchipo, Korea	H. K. Weir	2		...		25	102	8	1,438	1,025	2,073	1 423	.....	.....	.....		6,459	85		...	...	...	...	85	Yes	.....	30 Sen	No	Y. 1,169	.....		Y. 1,055	Y. 2.232	Y. 3.794	Y. 4.557
*Kuangchihuynen	M. E. M.	Changti, Chihli	J. L. Keeler	2	1	3		15	125		1,049	76	4.046	360	35	8	328	70	6,077	197		75	12	...	96	370	1 cent gold	Yes	20 cents a day	.....	160	185	110	1,000	1,456	1,500	1 000
Margaret Eliza Nast Memorial	"	Siengfu, Fukien	Emma J. Betow		5	1		70		223		790		2,246		79	228		3,663	.....		...	...	...	...	...	50 cash	100 cash up	100 cash a day	.....	.....	.....	.....		.....	.....	.....
*Moukden	U. P. Presbt.	Mookden, Manchuria	D. Christie		4	7		90	587		9.479		12,105		119		.....		22,251	.....		515	272	272	295	1,143	No	No	No	Sometimes	.....	.....	1,500	500	200	3,500	.....
"	"	"	Horner, Starmer		3	5		65		339		7.401		6,686		71		4.304	18,804	185	104	67	5	6	...	369	No	No	12 cents	$3.	.....	.....	6.85		.....	.....	.....
Weihuifu	Canad Presbyterian	Weihui	McClure	3		...		100	.....		.....		.....		.....		.....		15,034	.....		...		...	...	191	No	No	.....	2,000 cash	.....	.....	.....		G. 92	G. 415	G. 323
Taiyuenfu	Eng. Baptist	Hunan, Shansi	Broomhall	2	1	4		...	52	34	1,291		2 760		58		.....		.....	116		...	...	...	...	...	50 cash	.....	.....	1·25	243	11	390	156	.....	£295	£210
Chenchowfu	Reformed Ch. U. S. A.	Hunan	Kelly	...		...		100	.....		.....		.....		.....		.....		.....	.....		...	...	...	...	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Eliz Blake	Presbt. South	Soochow	Wilkinson		21	4		70	336	102	.....		5,362		.....		.....		.....	30		20	1	2	...	...	No	Yes	Yes	$5	962	786	.....		2,965	5,286	1,736
Kayug	A. B. M. U.	Kayug, Kwangtung	Grant	1	1	2		6		4	.....		1.409		40		.....		3,675	2	41	3	2	...	41	89	No	Yes	100 cash	$1	7	154		22	182	642	.....
Suifu	"	Szechuan	Tompkins	2		...		28	82	11		930	2	275	50	522			3,870	15	36	3	1	7	9	71	24 cash	1,800 cash	3,000 cash	1,000 cash	214	90		82	386	1,050	665
M. M Society	M. M. S.	Canton	Swan, Todd, Boyd	2	2	18		250	1,131	433	.....		17,153	7,859	267	275	.....		26,576	1,300		...	...	140	...	2,701	2 cents	No	50 cents registration	Yes	9,000	1,000	1,000	1,200	15,000	12,000	.....
Douthwaite Memorial Fuhyia	C I M	Chefoo	Hogg.	1		3		36	56	22	4.332	1,152	6,925	950	.....		.....		13 628	60	284	12	19	3	58	372	10 cash	Venereal	Board	Yes	202	189	279	295	1,703	1,847	204
Good Shepherd	M. E. M.	K'aifengfu Lekduming	Carr	2		...		...	92	2	.....		5,045		45	13	.....		5,196	106	13	108	2	...	...	219	50	.....	Yes	2,000 cash	423,116	cash		4 730 cash	427,846 cash	753,000 cash	£125
General	"	Cheang, Fukien	Charleton	1		3		20		102	.....		3 204		300		.....		.....	.....		...	...	...	...	.....	C. liver oil	Self-provided	$5 obstet.	.....	.....	.....		450	C. 700	G. 700
Taianfu	"	Chentu	Canright	8		...		20	118	5	3,688	570	10,223	2,100	47	6	.....		16,907	20	100	5	1	6	25	162	20 cash	sometimes	100 cash	$2	Tls. 742	Tls. 350	Tls. 122	Tls. 355	Tls. 1.214	Tls. 1,097	Tls. 353
Alice Memorial, Nettersol, Hombling		Taianfu	Ensign	1		...		6	.....		1,847		1,921		25		.....		3,193	60	144	29	...	40	273	50 cash	.....	1,000 cash	1-10,000 cash	305	.....	.....		305	1,760	.....
	L. M. S.	Hongkong	Gibson	2	4	35	6	100		871		15 937		12 031		45		.....	28,884	128		119	4	91	1695	2,038	No	No	15 cents	.....	.....	.....		10,000		13,000	14,000	.....
Peking		Peking	Cochrane, Peill	2	1	5	3	...	362	120	.....		.....		.....		.....		48,664	195		...	...	...	...	...	Yes	.....	Food	.....	.....	.....	.....	.....	.....	.....	.....
Hsiaochang	"	Hsiaochang, Chihli	Stuckey	1		2		60		77	.....		.....		.....		.....		3,500	.....		...	...	...	...	77	50 cash	.....	100 cash	.....	Tls 82	Tls. 1	Tls. 11		.....	.....	.....
Tsaoshih	"	Tsaoshih, Hupeh	Wills		...	4		30	230	7	2,318	639	2,638	505	7		.....		6 338	188		49	...	...	...	257	40 cash 10 cash return	No	200 cash register 100 ,, a day	3,000 cash	5,425.00 cash	3,688.40 cash	311.80 cash		9,415 20 cash	.....	£100
Kiating	Canadian Meth. M.	Kiating, Szchuan	Service	1	1	...		30	75	22	1,338		2.961		145		335		4,876	66	22	1	...	3	...	92	30 cash a month	.....	60-100 cash	800 cash 200 return	.....	.....	.....		712	1,332	620
Womens' Hospital	Norwegian M. S.	Changsha, Hunan	Gotteberg		2	...		20		52		578		1 662		24		.....	2,316		13	2	4	...	6	25	50 cash	.....	100 cash	$5	205	12	4	26	247	877	630
Mary Black Memorial	American M. E. Methodist	Soochow	Polk		2	2		30		232		6 700		2,725		353		.....	10,010	94	121	12	8	27	35	82	20-60 cash	if able	10 cents	$5 up.	2,422	844	97		3.361	3,740	G. 600
St. Peters	A. P. E. Seventh Day Baptists	Wuchang Lieuoo, Kwangsu	MacWillie	2		...		35		252		2,488		4,100		12		.....	6,872	51	287	1	...	...	28	367	69-20 cash	Venereal	$1-2	$3 up	435	337	235		972	all we get	G. 1,100
	American Presbyterian	Haifong, Hainan	McCandlis	4	1	...		70	527		.....		2,931	1,304		75		.....	4 310		97	1	...	...	135	233	No	Yes	.....	np to $5	393	.....	20	178	590	577	.....
Kaiyuan	U. F. Scotland	Kaiyuan Manchuria	Young	2		...		30	123	28	.....		9,417		33		320		.....	203		...	...	...	...	...	No	Santonin Sulphur for quantity	500 cash entrance Food and Subscription	$3.	.....	.....	.....		2,050	.....	170
Wukingfu	Eng. Presbt.	Kwangtung	Riddell	2		7	2	70	548	192	2.128	1,352	3,867		.....		200		8,287	50	173	80	...	7	95	405	15 cash		Yes	sometimes	66	587	Tls. 308	£15	Tls. 308	£243	£148
Pingtu	S. B. C.	Pingtu, Shantung	Oxner,	1		...			.....		5,205		.....		274		128		6,863	132	134	35	3	2	...	216	No	.....	Yes	$1·6	727	.....		158	£74	£175	£36
Lungsang	C. E. Z. M. S.	Yoochow	Shire		1	...		32		85		870		3 938		170		.....	5 063	12	4	5	3	7	...	32	50-10 cash	No	10 cents register	$2 up	123	.....	17		140	.....	1,206
Kienning	C. M. S.	Fukien	Pakenham Churchill	1	2		61	245	88	1,396	187	2,745	398	80	22	1 247			6,338	8	121	1	1	...	...	131	20-10 cash	.....	20 cents up	Various	205	79	21		304	1,062	.....
Mung Dark Kuetlin	"	Kwangsi	Hautington Cliff	...	...	...		6	...	32	.....	475	.....	2,200	32		180		3.919	.....	17	...	...	6	22	...	25 cash	Yes	to cover Exp.	$3-10 $5	...	71	120	£160	100	300	300
Stout Memorial	Baptist	Wuchow, Kwangsi	Meadows	2	1	...		40	79	12	2,200		900		44	18	40	20	.....	33	122	9	4	3	120	...	10 cash	...	10 cents	$5	400	.....	48	800	448	1,248	800
Hope and Wilhelmina	Am. Ref. C.	Amoy	Otte Hunic.	1		4	1	100	1,002	456	821	2,214	4,269	1,185	1,076		.....		9 605	271		116	26	7	79	499	30 cash	.....	10 cents	$5	1,885	.....	312	239	4,236	3,500	1,445
Yale	Yale	Changsha	Schall	2		...		10	.....		.....		.....		.....		.....		.....	.....		...	...	...	...	...	50 cash	.....	food and med.	$5.	.....	.....	.....		.....	.....	.....
Kinkiang Memorial	Ch. of Scotland	Ichaug	Graham, Stocks	4	2	...		65	458		7,118		8100		.....		.....		15,218	167		19	3	...	...	...	10 cash only	specific	80 cash	1,000 cash	.....	.....	1,075		.....	£350	£300
St Elizabeth.	A. C. M.	Shanghai	Myers		4	...		54		332	381	1,442		2.468		51		.....	4,685	48	42	2	4	5	35	231	30 cash	No	15 cents to $1·50	$5	1,504	24	125		1,753	2,989	G. 1,000
Memorial	Eng. Presb.	Swatow	Lyall	4		6		230	2,193	456	3,269	852	.....		370	473	.....		17 336	385		638	...	24	191	853	No.	No	Board	.....	£ 29	£82	£85	£60	£256	£488	.....
*Women's	"	"	Beath		6	...		90		530		851		.....		30		.....	2,000		154	51	...	28	49	151	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
*General	"	Chinchew	B Paton	...	9		90	637	83	1,468	279	.....		.....	169	55	.....		9 465	296		...	...	63	...	357	.....	.....	.....	.....	.....	.....	£36	£2	£145	£123	.....
*Women's	"	"	B Paton	...		...		23		173		1,455	.....	.....		228	.....	.....	65	...	...	...	...	139	204	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
*Taian	"	Takon	Anderson	...	2			20	235	49	650	287	.....	.....	133	78	179	149	5.731	130		118	...	...	66	314	.....	.....	.....	.....	£1	£9	£1	£32	£42	£52	.....
Laoling	Eng. Meth.	Chuchia Chuangtung	Jones	4	1	1		42	221	50	.....		.....		.....		.....		6,864	.....		...	...	...	...	160	50 cash	Worms Malaria Venereal	1,000 cash	1,000-2,000 cash	491.767 cash	192.224 cash	Tls. 170	£200	... ...	.....	.....
		TOTALS		556 (79)		4481 (83)		34,000 (84)											913,200 (80)					7180	†24,841 (87)									$205,700 (70)	$245,471 (73)	

Total Hospitals 166.
Total Dispensaries 241.
Total on this sheet 104.
Figures in brackets represent the number of hospitals reporting under each head.

All sums are in Mexican dollars, unless otherwise stated. *** Previous year's Returns.** **† Dental not included.**

MEDICAL MISSIONARY ASSOCIATION OF CHINA CONFERENCE OF APRIL, 1907, SHANGHAI.

First Row:—Dr. Hume, Dr. Tooker, Dr. Lewis, Dr. Menzies, Dr. McWilhe.
Second Row:—Dr. Devol, Dr. Seymour, Dr. Weir, Dr. Young, Dr. Young, Dr. Wells, Dr. Churchill, Dr. Jefferys, Dr. McAll.
Third Row:—Dr. Hart, Dr. Daniel, Dr. Machle, Dr. Lee, Dr. Taylor, Dr. A. W. Tucker, Dr. Sjoquist, Dr. Evans, Dr. Beebe, Dr. J. L. Maxwell, Dr. Hodge, Dr. Selden, Dr. Whitney, Dr. Shields, Dr. Main, Dr. Layton, Dr. Boone, Dr. Worley, Dr. Stuart (President), Dr. Grant, Dr. Christie, Dr. Kilborn, Dr. Park, Dr. Kilborn, Dr. Hall, Dr. Henry, Miss. Sundal, Mrs. Hall, Dr. Avison.
Fourth Row:—Dr. Mack, Dr. Cattell, Dr. Sendder, Dr. M. E. Fitch, Tooker, Dr. Davenport, Dr. Lerrigo, Dr. Cousland, Dr. B. A. S. Taylor, Dr. Butchart, Dr. Hogg, Dr. Dau, Dr. Gillison, Dr. Swan, Dr. Plummer, Dr. Tribe, Dr. Myers, Dr. Edmunds, Dr. Seabury, Dr. Carlton, Dr. Hoag, Dr. Gotteberg, Mrs. Avison, Dr. Palmborg.

The
China Medical Journal.

VOL. XXI. JULY, 1907. No. 4.

Original Communications.

[All copy must be in the hands of the Editors one month before date of publication to insure appearance in the following number The editors cannot undertake to return manuscripts which are sent to them. A complimentary edition of a dozen reprints of his article will be furnished each contributor. Any number of reprints may be had at reasonable rates if a *written* order for the same accompany the paper.]

SOME PROBLEMS IN SUB-TROPICAL MEDICINE, WITH SPECIAL REFERENCE TO THE USE OF THE MICROSCOPE.*

BY O. T. LOGAN, M.D.

One of the able editors of the CHINA MEDICAL JOURNAL once paid me the doubtful compliment of saying that I had a hobby. He referred to some work I had done in helminthology and indicated that I bad a weakness for this sort of work. I admit having possibly had a weakness *from* belmintbs, having played at the same time the role of investigator and subject, but I cannot say that worms are my hobby. Indeed a hobby is something one rides, and I plead innocence from the editor's charge because I have furnished the transportation as well as the nourishment for the nine-inch nematode that started vain thoughts in my head of having my name linked witb this worm after her deatb as closely as we had been associated during ber life.

The last meeting of the Association harely escaped, eitber through the negligence of tbe Chiuese Post, or tbrougb its collusion with the promoters of that meeting, the infliction of a paper setting forth some studies and conclusions that were brougbt about by the aforesaid worm. The official JOURNAL of our calling was not so fortunate, however, and I manaʌed to corner the editors at a time when manuscripts were low and get my article ou the "X" egg, with photographs much larger than life size as frontispiece, published last September. My hearers need not feel superior to the JOURNAL, for the first thing I am going to do is to say a final word about this atypical egg of *Ascaris lumbricoides* that has

* Read before the meeting of the China Medical Missionary Association, Shanghai, April 20th, 1907.

caused many of us so much speculation. My excuse for doing this is that none of the text-books at our command, with a single exception which I shall cite later, describe or depict the atypical *Ascaris* egg in question, and for the further reason that as eminent an authority as Stiles would venture no explanation until recently—and that after studying our specimens and considering the matter for more than a year, of the striking difference in the morphology of the atypical, which, as I shall show, is the *unfertilized* egg. Soon after my paper appeared I received the following letter from Dr. Stiles :—

WASHINGTON, D. C., *October 8th, 1906.*

Dr. O. T. LOGAN,

Changteh, Hunan, China.

SIR :

I am in receipt of your interesting letter of June 22nd, together with the specimens of *Ascaris*, which I have numbered 9,939 in our catalogue.

I have found the same peculiar *Ascaris* egg in a patient in Washington, and looking up the literature I came across an article in the *Centralblatt für Bakterioligie und Parasitenkunde*, in which the author refers to the peculiarity of certain eggs and came to the conclusion which you do, namely, that they are not fertilized.

I have studied quite carefully the tails of two males which you forwarded. The papillæ seem to agree essentially with the papillæ described for *Ascaris lumbricoides* in Europe. I do not, therefore, feel justified in concluding that your specimens represent a new species, but I am inclined to agree with you that some of the eggs you have found are unfertilized. Looking forward with interest to further letters from you,

Respectfully,

(Signed) C. W. STILES,
Chief of Division of Zoology.

I give the letter, which refers to the second lot of specimens sent—the first containing no males—for the reason that I want to show how willing scientific men, of whom Dr. Stiles is a type, are to help us lesser lights in our perplexities, so that others in this field of China who find things out of the ordinary may not be too timid to seek help of those who know.

Following on this letter I received another from Dr. Hume calling my attention to a recent book (1) he had received describing *Ascaris lumbricoides* eggs as follows: "Fertilized eggs, elliptical, shell with transparent mammillated covering, 50-75 (microns. L.) long, by 40-58 wide. Unfertilized eggs, irregular with scanty albumin covering, coarser granules and thinner shell, measuring 81 by 45."

I think that Wellman (2), of West Africa, is more nearly correct when he describes the unfertilized egg—which he also thought was the egg of a new species of *Ascaris*—"as found in the feces, neither yolk nor shell can be made out. The crenated and rugose envelope is opaque and stained with bile, and might easily be mistaken for a small mass of fecal matter. Ova taken from the uterus at various stages of development show a simple shell filled with a granular yolk."

The fertilized egg appears the same, except its color, whether we take it from the uterus or the feces, but the unfertilized egg changes markedly in appearance; its shell appearing thick and rough in the feces and the fine granules of the intra-uterine egg apparently becoming coarse globules in the egg found in the feces. Wellman's explanation would solve this difference.

ANKYLOSTOMIASIS (HOOKWORM DISEASE.)

A disease which has attracted a great deal of attention in late years is ankylostomiasis. We have a dozen or so cases every year in our clinics. The recognition of this malady is very important, and it can be made in a few minutes with the microscope, provided one has a good thin specimen and his sub-stage illumination is not too great—a point in technique that cannot be reiterated too often. The disease once recognized, responds beautifully to treatment, and the incapacitated anemic patient soon rejoices in his returning strength and well being.

Loos (3) has conclusively shown that in all probability the usual mode of infection is not by drinking dirty water, as was formerly supposed, but that the embryo of this little worm enters the skin, usually of the feet or legs and passes into a blood vessel where it gets into the circulation and is carried to the lungs. It leaves the blood vessel and tarries a while in the lung tissue, where it becomes more mature and then enters an air vesicle and travels in the air passages to the esophagus, from whence it continues its course to its permanent abiding place—the small intestine. The lesion caused by this worm as it passes through the skin is called "Ground itch" or "Coolie itch." It is a papulo-pustular dermatitis which often takes on phagedenic characteristics, owing to secondary infection from scratching. I doubt not that many of the cases we see in farmers who wade in the paddy fields in the spring belong to this class of dermatitis.

I cannot refrain from telling how a planter in the West Indies rid his coolies of this itch and the anemia that follows. He simply made them a pair of "antiseptic socks" as Manson calls them by having his coolies dip their feet and legs in tar each morning and then walk through sawdust. The result was all that could be desired.

Schistosoma Japonicum (Catoi)

The prefecture of Changteh has furnished two cases and the prefecture of Changsha one case of the disease caused by this fluke for our clinic. All of these cases would have passed for dysentery with accompanying anemia had not the microscope told us that we were dealing with trematode infection of which the bowel symptoms were only the result of the ulceration caused by the eggs working their way through the bowel coats. Two of our cases were bloated, while the third was much emaciated. Dr. Taylor (4) also reports a case that was extremely emaciated. I am inclined to think that the emaciation comes after the edematous stage; at any rate our last case gave such a history. One case entered the hospital and improved greatly both as regards his bowel symptoms and his hemoglobin; the latter going from ten to thirty-five per cent. in about a month. (5) After he went out we had word that he became worse and was too weak to come back. Of the other two cases one died and one was lost sight of.

Ameba Coli. (Tropical Dysentery.)

In all cases of intractable diarrhœa and dysentery a search should be made for this organism. The stool must be recently voided and the specimen made from the mucus that is passed with the stool, for here will most of the ameba be found. As little pressure as possible to get a reasonably thin film should be used. Search is made for small granular bodies, 15–30 microns in diameter, possessing ameboid movements. These are the cause of tropical dysentery, which is followed so often by liver abscess—one case in every five in India, according to Osler. (6) That there are other kinds of dysentery not dependent upon the ameba there can be no doubt; still, these organisms once found call for treatment that will rid the patient of them. Manson calls attention to the fact that a patient may have liver abscess as a sequel of dysentery, although the dysentery may have been attended with no passage of blood.

Since beginning this paper I have had a case, the wife of a mandarin. Some two months ago she began to pass blood in her stools, but as the pain was insignificant, she kept up until a fortnight ago, when she had to take her bed. There has been no pain nor tenesmus, although she has lost much blood. When I saw her and heard the history I suspected a rectal polypus, but the microscope revealed thousands of *Ameba coli.* Not having a warm stage and after trying several makeshifts without getting much movement from the amebæ, which will not move when cold, I thought of the broken plate glass that was to have been used in our surgery skylight had it come intact.

Picking out a fragment about the size of the microscope stage, I placed it in warm water, then dried it and placed it on the stage. On top of the warm glass the specimen, mounted in the usual way, was placed. The amebæ at once began to move and I studied them to my heart's content. I see no reason for buying a warm stage when this plan, which is at once effective and cheap, serves the purpose. It has other uses also, for instance in studying the movements of the malarial plasmodium and in preparing fresh blood for study, as it is easier to get a good specimen if the slide is warm.

MALARIA.

Every once in a while we think we know all there is to be known about malaria because we can call off all the names of the double-life cycle of the organism and know the difference between a *Merozoite* and a *Sporozoite* and because we have known all our lives that *quinine* will cure malaria. I assure you, however, that I, for one, have learned much about the treatment of malaria lately, especially about the importance of the treatment of this disease after the chills and fever are under control. During the last year we have had an epidemic of malignant malaria in our vicinity. I say "epidemic" advisedly, for I have carefully watched with the microscope since 1901 for the malignant organism and its attendant symptoms in patients. Just when I had concluded that this region was free from the disease, we were, in 1906, visited with a veritable epidemic. Benign tertian and quartan malaria we have as endemic diseases, but strange to say seldom see quartans now, whereas in 1901 to 1903 ninety per cent. of malaria was of the quartau variety. I think a partial explanation of the epidemic is that in 1905 a region of Hupeh and Hunan, north of here, was visited by floods, by which thousands were driven from their homes. The country there is very malarious, and it is probable that a sufficient number of refugees came to our region with malignant gametes in their blood, thus infecting our anopheles, and I doubt not that we shall have plenty of malignant malaria from this time on.

Manson says (3): "With a view of preventing relapse, fifteen grains should be given every tenth and eleventh day for six months. This treatment is usually absolutely successful. But as in many instances the germ does not die out for some two or three years, I think it desirable to give a short course of *quinine* at the spring and fall of the year, of say fifteen grains every tenth and eleventh day during a month at each of these seasons. I also advise the patient, should he be the victim at any time of exposure, or fatigue or of physiological over-strain, to take one or two fifteen grain doses of the drug on such occasions."

STAINING MALARIAL BLOOD.

One of the hardest things to do, so far as my experience goes, is to recognize with certainty the young parasite of the so-called malignant or sub-tertian malaria in the fresh blood. On the other hand, if properly stained with Wright's or Leishman's stain, it is easy. I prefer Wright's, but as it is sold only in fluid form, at least that is the only way I have been able to buy it; by the time it reaches China it has lost its power of differentiation. I have come to depend on Leishman's soloids as sold by Burroughs Wellcome & Co.

With these soloids and a supply of methyl alcohol, which must be strictly pure—I advise Merck's "reagent"—one can in a few minutes make the stain ready for use. Distilled water must be used for washing, otherwise a precipitate will be thrown down and may mask the organisms. Properly stained the young parasites show as delicate blue rings with the chromatin forming a beautiful garnet set. I find that by ringing the field that is to be stained with *vaseline* undue spreading and crystallization of the stain is prevented.

ENDEMIC HEMOPTYSIS. THE LUNG FLUKE.

Paragonimus westermani. (Distoma pulmonale. D. Ringeri).

This fluke is responsible for a serious lung trouble in which patients expectorate viscid red phlegm that might be mistaken for the bloody sputum of phthisis. The microscope reveals eggs of the fluke and establishes the diagnosis. I have never seen a case here, but am on the look out for it.

FEBRILE TROPICAL SPLENO-MEGALY. (KALA AZAR.)

I suppose others, like myself, have been impressed with the number of patients they see suffering from enormously enlarged spleens. Our cases have not complained of fever; indeed it is hard to get a history of fever from them. The clinical picture need not be dwelt upon more than to say that there is emaciation, anemia, enlargement of the spleen and liver usually accompanied by chronic fever, before which the doctor is helpless, so far as eradicating the disease is concerned. It* has been found by Drs. Aird and Thompson in Hankow, Manson confirming their diagnosis from the specimen sent him. The probability is that it occurs in all parts of Central and Southern China. It has raged in Assam as a devastating epidemic and is common in parts of India. Dum Dum fever, formerly thought to be malarious has been proved to be caused by the specific organism of this disease, the Leishman body.

* Leishman bodies.—ED.

These can be demonstrated during life only by aspirating the spleen or liver with a fine needle, blowing out the small amount of pulp on a slide and staining with Leishman's stain. Thus stained, the minute bodies will be found, consisting of a faintly staining amorphous matrix, in which are set two chromatin masses, the larger of which is oval or spherical and the smaller usually rod-shaped. The larger chromatin mass stains red, but less deeply than the smaller. I have never had the courage to aspirate one of these cases, as so many deaths have followed this simple procedure, owing to the spleen being so friable. I refer the hearers to Manson's work (3) for a fascinating description of this malady, together with its connection with the Oriental sore, in which the Leishman body is also found. As this sore is found only in camel using countries, I am curious to know whether the camel drivers of the north of China are affected.

BLOOD EXAMINATON.

I am told by a young colleague that the red cells are being counted less frequently than formerly in the hospitals at home, while the white corpuscles are being counted more frequently. The reason is not hard to find, for, roughly speaking, the red cells and the hemoglobin go up and down together and estimating the hemoglobin is almost as easy as taking the pulse, if Talquist's scale is used, while counting the red cells is a tedious and painstaking task.

I regard my hemocytometer as a Texan is said to regard his revolver—something not often needed, but when one needs it he needs it mighty bad. A high count of the leucocytes, provided they are polymorphonuclears, always means active inflammation. One must not overlook the fact that a tonsilitis or an ulcerating toe nail will run the count up and may mislead one. On the other hand, if the infection is so great that the bodily resisting powers are overcome or if the pus is well walled off, there may be no rise in the count above normal. Bearing these things in mind, there is no doubt that a count of the whites is of great help in diagnosis, treatment and prognosis. Two cases will illustrate. A missionary was taken sick of appendicitis with classic symptoms, and the blood count proved that there was active inflammation; the count running up to twenty odd thousand. With the symptoms little changed, the count two days following showed only sixteen thousand, which told that the attack was subsiding and gave us grounds for a favorable prognosis, so far as the particular attack was concerned. Another, a surgical case in a native, suddenly developed a fever of 103°, which was maintained. No malarial organisms were

found in the blood and the wound was progressing beautifully. Repeated counts of the white cells showed the normal number, and we diagnosed typhoid by exclusion; the subsequent history confirming the diagnosis. Here I am treading on debatable ground, for I have heard it said that the Chinese do not have typhoid unless they drink fresh milk. I do not hesitate to cross swords with any who hold this opinion, for I think I have seen many cases, although we are not often called to fever cases. May I suggest a way to settle the matter. Let some one who has the ear of the very efficient gentlemen who have charge of the Shanghai Municipal Laboratory undertake to make some arrangement whereby we may send them blood from our native fever cases that resemble typhoid and ask them to keep a record of these Widal tests which will be proof one way or the other.

Manson (3) calls attention to the fact that liver abscess is very often treated as malaria. He says: "Perhaps in consequence of the periodic quotidian fever usually accompanying it, the tropical disease most frequently confounded with malaria is liver abscess. It is quite a common occurrence to be consulted by patients affected with grave suppuration of the liver, who for weeks, or even months, have been under the impression that their disease is malaria, and who, in fact, have been treating themselves for malarial disease. I think it was Osler who said that he had never seen a case of liver abscess that had not been drenched with *quinine*." In liver abscess one would find a polymorphonuclear leucocytosis, while malaria gives a leukopenia with a relative increase in lymphocytes, (3) except during and two to four hours after the paroxysm, when there may be leucytosis. (6) An increase in the relative number of lymphocytes, therefore, should lead us to look very carefully for malarial organisms.

The modern books and medical publications are so full of information on the subject of blood examination that it is not proper to go into the matter fully in this paper.

EXAMINATION OF FECES.

A piece of fecal matter the size of a hemp seed is selected. If the specimen is dry and hard, it should be mixed with water until it is of the consistency of thin paste. Any hard substance that is found, such as grit or vegetable fibre, is teased out with a match or toothpick, so that the cover glass when applied will lie flat. Moderate pressure may be used to get a thin even field. I use a 1 inch eyepiece and a $\frac{2}{3}$ inch objective for finding and a 1/5 inch objective for checking, if in doubt. These give 90 and 350 diameters respectively. For *ameba coli*, unless

SOME OBJECTS FOUND IN THE FECES SHOWING RELATIVE AVERAGE SIZE.

1. Red Blood Corpuscle.
2-3. *Amebae coli*.
4. Egg of *Tricocephalus dispar*.
5. ,, ,, *Ankylostomum duodenale*.
6. ,, ,, *Ascaris lumbricoides*, fertilized.
7. ,, ,, ,, ,, unfertilized.
8. ,, ,, *Schistosoma japonicum*.

×500 (approximate.)

one is familiar with the appearance, ¼ or 1/5 inch objectives would have to be used, as the organism is only about three times the size of a blood corpuscle. A poorly prepared specimen, especially a thick one, will surely mean failure in searching for the more delicate eggs, such as those of *Schistosoma japonicum* and *Ankylostomum duodenale*. The result will be the same if the sub-stage illumination is too great. Compared to blood examination, the examination of feces is child's play, because the objects sought for are comparatively large. Where the stool is very fluid the top part should be poured off and the specimen secured from the sediment.

SUGGESTIONS FOR MICROSCOPIC STUDY.*

In conversation with medical missionaries at Kuling I have noted how few have done fecal examinations. Allow me to venture a few points that have helped me, for I have had to work out what little I know practically unaided, except by the often too meagre information to be gotten from books. When looking for something I have not seen before, I get in mind how many times greater or smaller it ought to be than a red blood cell or a lumbricoid egg—two always obtainable articles in China. The drawings and photographs, especially of eggs, are notorious for their indefiniteness as to the magnifications used. If the description does not say that so-and-so's objective A and his eyepiece B are used in making the photomicrograph it is reasonably sure to tell you that it is "greatly enlarged"—a hackneyed and needless expression, since a microscopic object could not be seen at all, if it were not enlarged.

The beginner can always find the egg, both fertilized and unfertilized, of the ubiquitous lumbricoid in any Chinese latrine, usually associated with *Tricocephalus dispar* and less often with *ankylostomum duodenale* and *Necator americanus;* the latter being the so-called American hookworm, but Stiles pronounced some worms sent him from Changteh identical with the latter species. The eggs of the two are almost alike.

The domestic animals offer a fine opportunity for studying the eggs of parasites. Lately I have seen for the first time the egg of the tapeworm *Bothricephalus latus* in the feces of a dog. Cats harbor *Schistosoma japonicum* and I have no doubt that the rats in most parts of China harbor *Trypanosoma lewisi* and Manson tells us that the dogs of South China harbor *Filaria imitis* in great numbers, so that we may,

*Specimens of stained malarial organisms, *Ascaris lumbricoides* (fertilized and unfertilized), *Ankylostomum duodenale*. *Schistosoma japonicum* and *Tricocephalus dispar* eggs were presented at the meeting.

if we try, get an idea of these organisms that belong to the same family as those that are pathogenic in man. These latter suggestions are for those who have a taste for medical diversions. I have promised myself the fun of searching for them when I can find time. To me it would be far more interesting than some of the fads I see others taking up, such as collecting old coins or ugly brass.

I plead guilty in this paper of drawing largely on Manson's Lane Lectures (3), but my audience will forgive me after they have read this book, which is scientific enough for anybody and at the same time fascinating as a novel. I know of no writer who has the knack of working in illustrative cases and turning his phrases in such a way as to compel one to be interested and at the same time to be unable to forget his points in the future, as Manson, who might well be called the Father of Tropical Medicine. Armed with his book on Tropical Diseases, his Lane Lectures, *The Journal of Tropical Medicine* and a good book on Clinical Diagnosis, one is fairly well prepared to recognize the peculiar diseases he is likely to meet in this sub-tropical land. Let us hope that the pages of *The China Medical Journal* will become more and more the clearing house for scientific as well as helpful medicine. To this end we should pray the Lord of the harvest that He will send more medical laborers into His harvest, so that our hands and hearts may be more free for all good work. Scientific work is a by-product of our toil; still in a large plant like ours the by-product should not be insignificant. I hope the coming years will find us reporting the diseases we meet in our various sections, especially the rarer ones, so that the medical world may have a better idea of the geographical distribution, also that the newly arrived medical missionary may be forewarned and therefore forearmed, thus preventing his getting into pitfalls and perhaps sacrificing valuable lives. Let us away with mock modesty that is preventing many from writing for our JOURNAL. May it not be that what we think is modesty is only pride that makes us fear that our articles may be criticised?

REFERENCES.

(1). *Reference Handbook of the Medical Sciences*, vol. vi, p. 502.
(2). Wellmann. *New York Medical Journal*, August, 19, 1905.
(3). *Lectures on Tropical Diseases* (Lane Lectures). W. T. Keener & Co., 90 Wabash Ave., Chicago.
(4). Taylor. *The China Medical Missionary Journal*, January, 1907.
(5). Logan. *The *Journal of Tropical Medicine*, October 1, 1906.

* Published fortnightly by John Bale, Sons & Danielsson, Ltd., Great Titchfield St., London, W. 18/ annually, post free.

(6). Ewing. *Clinical Pathology of the Blood*, Lea Bros., Philadelphia.
McKernon. "The Clinical Value of Differential Blood Count in Operative Otology." *New York Medical Journal*, January, 1907.
Sondern. "General Considerations in Reference to Blood Examinations in Surgical Diseases." *Ibidem*, January 26th, 1907.
Simon. *Clinical Diagnosis*, Lea Bros., Phila.
Musser. *Medical Diagnosis*, Lea Bros. & Co., Phila.
Warren and Gould, *International Text-book of Surgery*. W. B. Saunde, Phila.

A CASE OF SUPPURATION OF MESENTERIC GLANDS AND A CASE OF CIRRHOSIS OF THE LIVER.*

By NEAL MACLEOD, M.D., Shanghai.

The two cases which I am about to bring to your notice to-day are, I believe, of somewhat rare occurrence, but will, I hope, prove not the less interesting and suggestive.

One of these involved failure to diagnose it during an observed illness of sixty-two days, and the other failure in treatment.

These failures and the invitation to address you, for which I am indebted to your energetic secretary, have been the means of enabling me to regard as well as to set before you two old maladies, in what may possibly be aspects new likewise to others than myself.

SUPPURATION OF MESENTERIC GLANDS.

A ship captain, aged fifty-one, a powerful, very healthy looking man, weighing over lbs. 200, was admitted to the General Hospital on 3rd January, 1900. His illness began five days previously in Nagasaki with chills and fever, and on the first day he vomited. Four days of constipation were followed by four stools on the day of admission, each of these with blood and with severe griping pain; one of them seen after admission to hospital contained blood which was believed to be from piles. He complained of pain in the hypogastric region; there was tenderness between the umbilicus and the right iliac fossa and the abdomen was slightly tympanitic. The tongue was coated white. The tenderness was present also on the next day when there were two stools which were loose but free from blood, and from that day nothing abnormal was observed in the bowel function. On the 8th day a trace of albumen was the only noteworthy abnormality on repeated urinary

* Read before the C. M. M. A., Shanghai, April, 1907.

examination. If you look at the temperature chart you will observe that there was fever observed sixty-two days in all, for the first seven of an irregular remittent type, afterwards intermittent and frequently accompanied by rigors and sweating.

The temperature rose on 41 occasions to 105 or over;
29 times ,, 106 do.
10 ,, ,, 107 do.
5 ,, ,, 108 do.

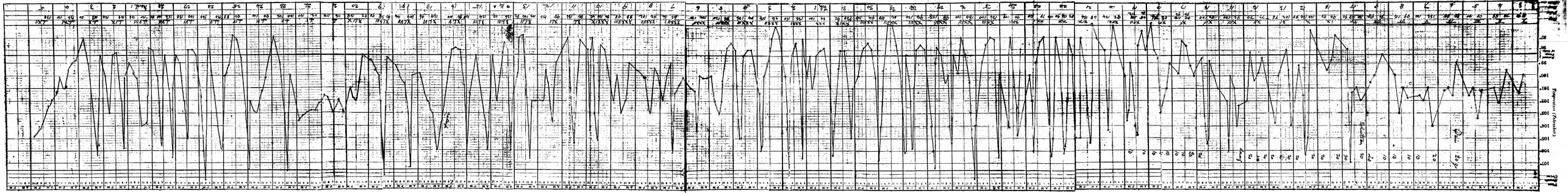
the highest reading being 108.4, which was reached twice, on the 24th and 55th observed days of the illness.

The blood was examined at the beginning and though no malarial parasite or pigment was found,* *quinine* was given solid and in solution, in large doses, as shown in the chart, without effect. The typhoid Widal reaction was absent. No sign of tubercular disease or of suppuration in any part of the body that could be thought of was obtained; the bronchial, mesenteric and other gland regions not being overlooked. After the first two or three days in hospital the only pain complained of, or that could be elicited by question, was an occasional headache, which did not always accompany the very high temperatures. The tongue cleaned at the end of the third week and remained so till death. For a good part of the illness the appetite was good and the patient did not feel ill, except, and not always, when the temperature was high, which you will see from the chart was frequently only for a very short time. On several of these occasions the sister in charge repeated the thermometric test, which I may state was done with the excessively high temperatures at first, partly, because the reading of the thermometer was distrusted, and, partly, because the patient did not seem so ill as such high temperatures suggested. A variety of drugs were administered, which I need not detail. None of them appeared to influence materially the course of the disease. The patient died, having been ill sixty-six days.

The chart did not fail to suggest pyæmia to several medical men who saw it and the case during life.

You may imagine that the post mortem examination of this man was attended with no small degree of interest. It revealed a plentiful deposit of fat in the abdominal wall, mesentery, omentum and elsewhere. Every organ was searched without result for a clue to the fever. Four of us who had seen the patient at various times were looking on when, as we were about to open the spinal canal as the only unexplored

* A differential blood count would probably have increased the suspicion but could not have aided in determining the location of suppurations.



region, one of us fortunately happened to grasp the mesentery which had been left in the abdomen, the stomach, small and large bowel having been cut away close to their attachment to the mesentery to facilitate flushing at the tap and opening for inspection. The mesenteric glands were then felt to be abnormally large. They could not be seen on the closest inspection, nor felt, unless grasped, because of the amount of fat surrounding them, which probably also prevented inflammatory involvement of the adjacent peritoneum, inspection of which also disclosed not the slightest abnormality. To our surprise, a large number, if not all of these glands were converted into little sacs of pus. Inspection of the mucous lining of the bowel failed to throw any light on the condition of these glands, and, unfortunately it did not occur to any of us until too late to determine from what part of the small gut the lacteals, running to the implicated glands, took their origin.

Failure to find the point of origin of infection in the bowel is said to be not uncommon in cases of tubercular mesenteric gland disease.

I have not been able to find any record of suppuration of the mesenteric glands as in this case. (Note.)

Remarks.—The absence of abdominal pain and tenderness after the first three days in hospital was accounted for, partly, by the affected glands lying so buried in fat as not to be affected by palpation, and, partly by the adjacent peritoneum escaping inflammatory involvement. This is not altogether strange, as one occasionally meets cases of suppuration in abdominal organs without pain or tenderness, notably in central liver abscesses where the peritoneal covering has not been involved.

My belief is, that in this case the pain and tenderness of the first two or three days in hospital, even then not a marked feature, attended the early stage of inflammation of these glands, but subsided when suppuration had taken place; the cessation of pain being not an infrequent accompaniment of the occurrence of suppuration in other parts of the body.

Situated as these glands were between the lacteals and the thoracic duct, and stored as they were with pus, sepsin, or toxin, as it is now customary to call it, the poison had for its introduction into the circulation a mechanism almost as certain as intravenous injection.

Note.—If it is assumed that the septic condition of these glands had its origin in the bowel, the question at once suggests itself, Why did the portal system escape infection in this case? as that system is the usual seat of secondary septic infection from the bowel.

CIRRHOSIS OF LIVER.

A man of fifty was admitted on 24th January, 1907, to the Geueral Hospital, complaining of abdominal distension which began on the morning of the 22nd, with pain in the abdomen not specially localisable and with retching, and from that morning neither wind per anum nor stool had been passed, having had diarrhœa previously. No solid food had been taken after the evening of the 21st. On the day before admission he was seen by a medical man, who had ordered one ounce of *Epsom salts* and thirty drops of *turpentine*, both of which were swallowed, retained and followed by no evident result.

At 5 p.m. on the 24th, when admitted to hospital, the belly was manifestly distended, tympanitic in front, somewhat dull in the flanks, slightly and equally tender everywhere. The tongue was clean, and there was occasional belching of gas. Thirst was great, but he feared to drink because of addition to the distension. The pulse was 120, regular and of fair strength, the temperature being 98.6. He did not seem very ill. A *turpentine* enema was given, but returned without evideut addition, while later in the evening by rectal tube, four or five ounces of yellowish fæcal fluid escaped from the bowel, but without gas accompaniment. After this he begged for something to make him sleep, as he had not slept for forty-eight hours. A similar attack had occurred in the spring of 1905 when in hospital for suture of a patellar tendon ruptured by a fall from a horse, aud, when various means of relief had been tried and failed until quarter of a grain of *morphia sulphate* and 1/150th of a grain of *atropine sulphate* hypodermically gave both sleep and relief. This dose was now given and there followed a comfortable night, beginning with five hours unbroken sleep.

The rectal tube was passed twice on the morniug of the 25th, with results similar to that of the previous night, but no gas escaped therewith aud the distension remained unaltered. The belching returned and was accompanied by bile-stained fluid at times.

Dr. Milles then saw the case with me, and it was decided if no improvement manifested itself in the interval, that the abdomen should be opened in the afternoon.

At noon the patient was manifestly worse in appearance and was vomiting fluid distiuctly fæcal in colour and odour, the temperature having fallen from 99 at 8 a.m. to 94.6, the pulse being 118. Dr. Milles opened the abdomen at once and incised the presenting, much distended, pale, small intestine on its free border when collapse followed the escape of gas. The collapsed part of the bowel lay flaccid aud without any attempt at contraction, the gas from the neighbouring parts above

and below having to be drawn off with the aid of a glass tube passed through the incision and the gut threaded on the tube. The flaccid wall of the bowel was observed frequently to block the end of the tube. The bowel was obviously paralysed.

The peritoneum was quite healthy and the hand passed into the abdomen could detect no obvious cause of obstruction.

The question of pulling out more than eight or nine feet of the bowel, and possibly of having to puncture more than once, as well as further search for obstruction, was discussed, but dismissed because of the patient's condition and that of the bowel as to paralysis. A Paul's tube was tied into the puncture for the relief of obstruction and the wound closed.

Ten ounces of normal *salt* solution was injected into the rectum after the operation and repeated twice before the next morning when it was noted that while liquid fæcal matter had escaped into the receiver, no gas had been observed to escape from the tube. The abdomen was less distended than before the operation, but the patient's condition was not improved, and he died at 8 o'clock on the morning of the 26th.

Post mortem examination disclosed a normal peritoneum. The small intestine, collapsed in the neighbourhood of the incision which was about seven feet from the ileo cæcal valve, was distended above and below the collapsed part, while nine inches from the valve the distension abruptly ceased. These last nine inches of the ileum were of normal calibre and where the distension ended, no hand, adhesion, volvulus, hernia or other abnormality was present. The part of the bowel below the puncture was very carefully followed downwards when it was plainly seen that at the limit of distension the bowel was folded on itself, the distended lying on, pressing and occluding the undistended part. The valvulæ conniventes of the jejunum were somewhat œdematous and reddened, but the lining of the gut was otherwise normal. The liver was a good example of portal cirrhosis, contraction being evident and the tissue hard and resistent. The gall bladder was twice the normal size, contained normal bile and many small gall stones, the wall being of normal thickness.

I returned the death as due to flatulent distension, paralysis with obstruction of the bowel, but late consideration of the case suggested that this man died of liver cirrhosis as certainly as if he had been anæmic, wasted and ascetic. I shall therefore ask your indulgence while I go into some details of the previous history which I am in a position to do from personal observation and which seem to justify such a view.

For over fifteen years this man had been over weight and latterly over lbs. 210. During twenty years I had had on several occasions to deal with congestion of his liver, dieting and cutting off alcohol. His conjunctivæ during all those years never lost their tell-tale yellow tinge. Three years ago he was jaundiced, the liver was large, tender and hard, and under treatment became reduced in size but slowly. This last liver disturbance lasted longer, was more severe, interfered more with his work than on former occasions, and the assurance that the organ would be lamed for the rest of his life, proved the means of considerably checking consumption of, but not in securing total abstinence from alcohol or from other than plain foods. Four months before his death he consulted me, I need not say for the first time, for morning diarrhœa; the call to evacuate the bowel was so urgent that it had to be attended to, however inconvenient. He described the stools as small, not always liquid but accompanied by the escape of enormous quantities of gas. In December, after eleven days' hospital observation and treatment, chiefly on milk, he had normal stools and lost the flatulence. The liver then was not above normal size. Relaxation of care in dietary was soon followed by a return of the flatulence and diarrhœa.

In the new year week while on a short holiday in Japan he tried to check the diarrhœa by means of some medicament recommended by a friend, which, he told me, the week before his death, had caused such distension that he had to stop it.

It is interesting to determine, if possible, the time of onset of the obstruction as well as the relative importance of that and the flatulent distension and paralysis.

The nervous and muscular apparatus of this bowel were no doubt unhealthy, and we may infer from the history I have detailed that distension would be likely to be first in the field, and would be not unlikely to prepare the way for, if not indeed to cause, paralysis. Such a bend as I have described must frequently occur in every bowel, but, obviously cannot persist so long as peristalsis is normal. Peristalsis would obliterate such a bend. With a bowel on the other hand more or less paralysed by gas distension, as was probably the case here, there would be nothing to prevent such a bend from effectively causing obstruction which would tend to further increase with gas accumulation, the distended gut above pressing on, flattening the part below the bend and emptying it into the cæcum.

The order of events might therefore easily have been, first, distension; then partial paralysis; next, the bend causing obstruction, followed by further distension above it and completing the paralysis.

The condition known as enterospasm occurriug in the last nine inches of the ileum could have produced obstruction like that found in this case, but I think the position in which the parts lay and the absence of the severe pain which accompanies enterospasm, negatives such a view.

In the absence of any trace of peritonitis, it has to be asked why did this man die ?

Contributing to cause death were at least two factors :—

1st. The absorption of abnormal products of digestion certain to accompany gas production, these products previously got rid of by diarrhœa before obstruction, after it, locked up in the bowel for several days.

2nd. The lessened resistance to all causes threatening life which could not fail to be the result of such a coudition of the portal and biliary systems of a liver disordered for years.

Aggravating these two factors was a third, viz., interference with respiratory and circulatory functions consequent on the abdominal distension impeding diaphragmatic and lower rib movements.

TWO RARE FASCIOLIDÆ.

By F. W. Goddard, M.D., Shaohsing, China.

I have recently stumbled upon two varieties of intestinal parasites, rare in our own medical literature and yet fairly common in this section. Owing to the lack of library facilities, etc., I gave the specimens to Dr. Maxwell and Dr. Jefferys of the Research Committee, to whom I am deeply indebted both for the work represented by the accompanying report and for the drawings.

The parasite, when alive, is the color of raw meat and crawls about quite actively ; the head being reared. Two specimens—possibly nearing the stage of decomposition—presented the appearance of a cluster of acini outlined in white along the line of the vitelline sacs. The same two specimens also presented a considerable ventral swelling corresponding to the conical pouch communicating with the ventral sucker. The eggs of the Distomum rathouisi are about two-fifths of the microscopic field under one-sixth inch objective and one inch ocular, have a thin shell and appear to possess a hyaline body moderately well filled with coarse granules of a greenish yellow tint. These eggs were present in both cases reported below ; the eggs of the Fascilopsis buski I overlooked, blinded, probably, by the discovery of the others.

AS TO THE CLINICAL FEATURES.

Case I. was a woman forty-two years of age, who consulted me first in September, 1906, complaining of weakness, loss of appetite, vague pains occasionally in the abdomen, and occasional fever. The bowels were apparently normal, though there had at times been periods of slight diarrhœa. Examination revealed nothing but some anemia of the mucous membranes. I prescribed a tonic and sent her to be with her husband, a student in Shanghai. While there she was examined by physicians privately and later in the clinics without benefit, and at the last visit when she asked to be received as an in-patient she was told it was too late and was allowed to return home to die.

I was informed by letter of this and of the additional fact that there was swelling of the feet and legs. Concluding that I had a case of ankylostomiasis to deal with, and having no thymol on hand, I went to her home (some forty miles away) armed with the following:—

℞ Eucalyptus Oil ... ... M xl
Chloroform ... ... M l
Castor Oil ... ... dr. x.

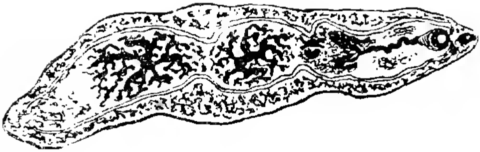
a remedy for that disease, given by S. P. Phillips in the *Journal of Tropical Medicine* for December, 1905.

I found the patient (March 24, 1907) greatly emaciated and very weak, with no appetite; in fact had hardly retained any food for a week past; abdomen scaphoid, no diarrhœa, skin harsh and dry, nails normal, mucous membranes pale, feet and legs, especially the left, quite edematous, the heart sounds clear, but very feeble, the radial pulse being hardly palpable, liver, etc., normal.

I gave the ℞ above in two doses at half hour interval, preceded and followed with *Epsom salts*. As a result twelve parasites were passed; the single specimen sent me (for unfortunately I had been compelled to return) being a Distomum rathouisi, the eggs of which were also found in the stools.

April 3 I again visited patient and found her apparently better. This time I administered two thirty-grain doses of *thymol*, followed by *salts*. One more parasite similar to the others was passed before I left. The next day she passed several more, but this time the Fascilopsis buski, which were forwarded to me in alcohol.

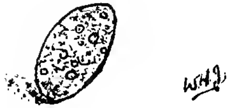
April 5 the edema was reported less, but there was some abdominal distress. Patient died on the 6th. Of course autopsy was out of the question.



× 1½

Fasciolopsis buski.

× 1½



Distomum rathouisi,

Case II. Boy, six years of age. Parents state that he has large and hard abdomen and some diarrhœa at times, but disagree as to his appetite. He has also lost flesh. Physical examination merely confirms the above; internal viscera (except intestines) apparently normal. Examination of feces showed numerous eggs of Distomum rathouisi, and the *Eucalyptus oil* prescription given as before produced ten or twelve of the parasites at once, and six more two or three days later. The oil was given April 11; without further treatment on April 24 he vomited two distoma, each of them alive. These were put in water, but soon died. The patient is still under observation.

This parasite, known to the Chinese as 薑片蟲, is quite common here and is thought usually to cause death, because the Chinese remedy is so obnoxious to the patient that the parents (for patients are usually children) are too sympathetic to make them take it. The cardinal symptoms are enlarged abdomen, diarrhœa, wasting, and occasionally jaundice. The appetite is usually preserved. The cause is supposed to be the excessive eating of aromatic foods, such as peanuts, or more especially the eating and drinking of all kinds of things at all kinds of times, thus preventing digestion. This produces the worm, so say the Chinese. I am inclined to think the egg may be carried on uncooked vegetables or raw fruit, but thus far have failed to find it.

The relation of this disease to the liver is interesting. The stools are usually light yellow in color and of a peculiarly offensive odor. Under the microscope I have found groups of bile-stained cells resembling liver cells; sometimes with no definite outline, sometimes three or four lobules held together by the enclosing network of fibrous tissue. Clinically I have observed no symptoms of liver involvement.

Several other cases of this disease are now under observation and will be reported later on.

REPORT ON TWO SPECIMENS OF DISTOMUM HANDED TO THE INVESTIGATION COMMITTEE BY F. W. GODDARD, M.D., SHAO-HSING, CHEKIANG PROVINCE.

Case I. *Size.*—Specimen measures 45 m.m. × 12 m.m.

Description.—No head cone. Small anterior mouth sucker. Large ventral sucker immediately posterior to this with large conical thick-walled pouch. The genital pore is visible at the interior border of the ventral sucker. The scirrhus pouch is a well marked tube seven m.m. long, running longitudinally immediately posterior to the ventral sucker. Shell gland easily seen a little anterior to the middle of the body with the ovary anterior to this and the testes posterior to the same.

Testes much branched reach to within ten m.m of the posterior end of the worm. Vitelline sacs extend from the ventral sucker to the posterior border where they merge.

Eggs (possibly immature). Size not measured, about a half that of ascaris lumb. Shell, very thin-walled. Contents, clear, small and granular, well marked nucleus in centre. Nearly spherical.

No operculum observed.

The specimen is one of

FASCILOPSIS BUSKI (SYN. DISTOMUM BUSKI; DISTOMUM CRASSUM.)

This case appears to be the eighth on record.

Case II. *Size.*—Average of several specimens, 18 m.m. × 10 m.m.

Description.—Contour-oval. Very slight prominence of head, hardly sufficient to designate a head cone, but varies somewhat in different specimens. Small mouth sucker with longer ventral sucker immediately posterior to it; ventral sucker has thick-walled conical pouch. The genital pore opens immediately anterior to the ventral sucker. Shell gland at junction of anterior and middle thirds. Ovary to right of this (?) Two testes posterior to shell gland, placed the one anterior and the other posterior to each other; the posterior testis reaches to within five m.m. of the end of the worm.

Vitelline sacs reach from the ventral sucker to the posterior end, where in some specimens they merge. Vitelline duct very sinuous, making a very deep curve between the testes and again over the uterus.

Egg.—Oval, size not measured, about one-third larger than ascaris lumb., thin-walled and smooth with very small operculum. Contents appear to consist of large granules.

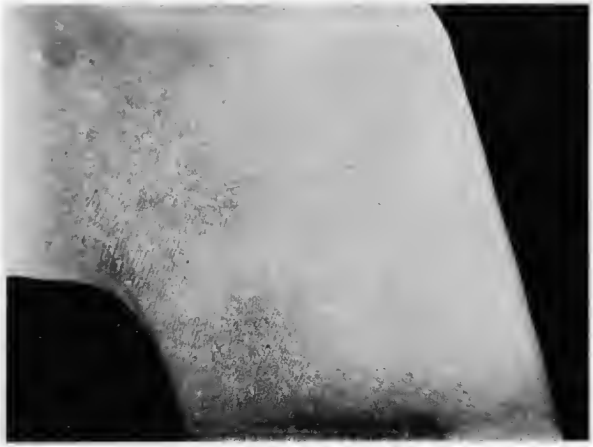
The specimen appears to be one of

DISTOMUM RATHOUISI.

Only one case of infection with this worm is on record, and the description of the worm from that case differs in some particulars from the details observed here. We believe, however, that such differences are not sufficient to warrant the description of this as a new form. The specimens in our hands are numerous, and they all conform to the description given above.

Note.—We differ altogether from the statement of Scheube that these two distoma are varieties of the same worm. In our specimens their forms, size and consistency differ in many particulars.

JAMES L. MAXWELL, M.D.
WM. H. JEFFERYS, M.D.



ATROPHIC SPOTS IN KAPOSI'S DISEASE. CASE HERE REPORTED.
CASE I.

See Page 199.

CASE II.

See Page 201.

A CASE OF XERODERMA PIGMENTOSA AND ANOTHER CASE.

By W. H. JEFFERYS, A. M., M.D., Shanghai.

Case I. is, I believe, the first case of Kaposi's desease reported in a Chinese patient.

Wong Loi-tsao male, aged fourteen years, Chinese, son of a rice merchant in this Shanghai district. Parents well, other children in fair health.

The patient has been in my wards three times, at intervals. The first visit was in the summer of 1905, the second in the autumn of 1906, and the last from March 17th to the 22nd, 1907. The first visit occurred when I was out of town.

The first visit was for a certain morbid condition of the skin, the second visit for a small tumor interfering with the drainage of the left eye, the last visit was made in extremis.

When I first saw him, October 1906, the patient was undersize, poorly nourished, thin and even weak in his movements. His muscles were flabby, and the word marasmic might well have been applied to his case. Stools showed pure culture of numerous unfertilized ascaris eggs. He was blind in the right eye, and a small ulcerating growth, arising at the root of the nose, interfered with the drainage of the left eye, in the conjunctival sack of which considerable muco-pus was constantly present. It was from the tumor and its anticipated effect on the sound eye that the patient desired relief at this time.

But, from the medical standpoint, the most noticeable thing about the patient was the condition of the skin. It was dry and slightly scaly all over the body. This was particularly noticeable about the ears, the auricles of which were almost shrivelled and felt like the uppers of an old pair of shoes, looked like them too more or less. The forehead and corners of the mouth were deeply lined, somewhat as in hereditary syphilis. The bridge of the nose had caved in, and a small tumor, like an exuberant granulation, was growing from the nasal root. This was later curetted and a sinus track found to lead into the frontal sinuses. The whole upper part of the body was covered with brownish to blackish macules, pin head to pea size; the higher up, even on the scalp, the darker the color, and according to the father, the older the lesions, this condition having appeared when the boy was about five years old and first on the face and slowly progressed to the present day. Between the macules was the natural dark skin of a rather dark Chinese, but about the head there was very little "between." The

pigmentation was dark brown on the neck, arms and chest, but from about the umbilicus down the macules instead of being brown, were bleached. These white spots were of the size and shape of the black ones above, but there were no black spots below the waist. The photograph shows very poorly the condition about the knee joint. The photographs of my case were unsatisfactory, but that of Dr. Maxwell's case, here produced by his courteous permission, represents the condition admirably. It corresponds to the condition of my patient when I first saw him. These white spots were slightly depressed, but only very slightly so.

There was a slight eczema over the cheek bones, and the patient complained somewhat of general itching of the skin. The most affected parts of the skin were the ears, the forehead and the cheeks.

There was some catarrh of the nose and the teeth were bad.

The right cornea was the seat of keratomalacia and that eye was blind. This was of about a year's standing.

At this time the tumor was thoroughly curetted away and the left eye improved. The patient was put on antisyphilitic treatment, and this was pushed. He stood it, but did not improve in any perceptible degree. Tonic and supporting treatment was also resorted to, but without effect. I had not then recognized the disease.

Third Visit.—On March 17th, the patient was carried to the hospital in extremis. He was excessively weak and anæmic. His skin was drier and more shrivelled. He could still see out of the left eye somewhat if he lifted with his hand a large boggy tumor of the forehead that hung pendulously closing the lid. The nose was almost ulcerated off and the granulations about its root had reappeared and spread to the inner canthus. The nostrils were occluded with the congested mucous membrane. On slight pressure over the forehead which bulged forward about two inches in a dome-shaped mass, pus would overflow from the region of the frontal sinuses.

In order to give the patient relief, I decided on the 22nd to open up the mass and drain it at least. An incision was made six inches across the line of the eyebrows and the skin of the forehead turned back. The outer table of the skull was almost ulcerated off and came away, leaving a vascular and friable mass beneath. Bleeding was so free that I had to go on and clean the thing thoroughly. The upper nares was opened up by the growth and the meninges exposed through an ulcerated opening an inch in diameter through the inner table of the skull. This huge cavity was packed with gauze and drained and the skin flap partially approximated. The patient died of shock half an hour later. No post mortem allowed, as usual in China.

KAPOSI'S DISEASE.

in an English child, from an unpublished photograph by Dr. J. D. Maxwell, Tainan, Formosa.

Cultures from the pus in the frontal sinuses gave a profuse growth on blood serum in forty-eight hours, chiefly a large rod taking stains poorly—methylene blue, eosin, gentian violet.

Dr. Stanley, Shanghai Municipal Health Officer, reports the tumor as follows :—

"Sections presented the appearance of tubular carcinoma, with patches of cell necrosis."

There is no possible doubt about the diagnosis in this case. It presents all the regular and typical characteristics of Kaposi's disease, which Grindon defines as "a rare, chronic, fatal disease, beginning in infancy, characterized by freckling, atrophic spots, telangiectases and keratoses, and later by the development of carcinomata and sarcomata."

The pathology of this rather rare disease appears to be still unknown, and if others have not been able to make it out with post mortems, I certainly cannot do so without them. But the impression that one gets from this case is a general sense of kinship between the disease and other degenerative states which depend for their causation on the pathological condition of one or other of the "ductless glands." And I rather expect that when the day does come, some one of these structures will be found absent or degenerate.

Case II.—Not diagnosed.

Woman, aged forty-five years, a farmer's wife from the Kiangpeh (north of the Yangtze, in Kiangsu Province.) Married and has three children nine years old and over, all in good health. Husband had some venereal trouble (unknown nature) and also the same disease as that from which patient is suffering, but it finished its course about the time she contracted it. This was six to seven years ago (perhaps five years).

Except for the disease complained of, patient is in excellent health, and has been so for years past. No other complaints can be elicited. No cough. Digestion and appetite good.

No history of miscarriages. Patient is rather large and well built. Has considerable adipose tissue and well developed muscles.

The present disease began some six years ago with slight pain in the right arm, rather deep, followed by the slow development of a couple of lesions (described later), which finally ulcerated and then healed with scarring, stellate and about the size of a silver dollar each. These are still quite perceptible, but are soft to the touch and whitish in color. From that time on this process was repeated at various points on the back, shoulders and less so on the abdomen, and has continued to repeat itself to the present time when there are some ten or twelve

active elevated pustulo-tuberculous lesions well crusted over and an almost continuous sheet of cicatricial tissue over the shoulders, back and buttocks, with some isolated lesions and scarred areas on the chest, abdomen and several active lesions on the high forehead as well as some scarring. These itch slightly, but do not pain. There are no signs of scratching.

The cicatricial tissue has some distinct characteristics. It is apparently much ridged and very uneven, but for the most part is exceedingly soft and velvety to the touch. In some places, as at the posterior axillary fold, it is thrown into ridges and folds, as if by bands of scar tissue, but even these are yielding and pliable. In many places there are peculiar slanting depressions or umbilications or quiltings, but they seem to all slant somewhat, not point straight in. Thus a small fold of skin fits over them as a sort of valve. In several places, where active lesions are present, there is a real keloid ridge. The largest of these is near the dorsal spine. These are reddish in color and firm, but otherwise the cicatrices are whitish and soft. The cicatricial skin is everywhere freely movable, not adherent to the subcutaneous tissues. There is no staining whatever as from healed gumma or syphilitic rupia. The lesions moreover are not gummatous in character.

The lesions are, at present, large, crusted, and tuberculous in character. A yellowish-green crust seals each completely which, when removed, reveals a few drops of mucoid pus. This in turn when wiped off reveals a red, rather healthy-looking granulating ulcer, raised above the surface about three-eighths of an inch and about the size of a twenty-cent piece in area. It is not possible to mark the place of long healed lesions unless it be the umbilicated points. This is quite likely, though there are none on the arm, the seat of the original lesions. There is no relation to the hair follicles or skin glands.

The Pus.—Several smeres, from two lesions freshly unsealed, showed many polinuclear leucocytes in good preservation, that is no detritus, and two forms of micro-organisms, a rod resembling the Bac. Tub, both in length and appearance and in its angular configuration, but not so slender and easily decolorizing with acid. It stains faintly with methylene blue. These are present in small numbers. There is also an encapsulated diplococcus, staining deeply with methylene blue, small and perfectly spherical. It is not any of the ordinary pus cocci. Some groups of fours were found and larger groups, but multiples of two. Grown in beef bullion, it proved unsatisfactory. Diplococci larger and somewhat flattened on one side, some staphilococci and streptococci probably contaminated the culture.

There is one acneform pustule on the left cheek.

The patient also shows a marked and typical lupus erythematosis of the nose and cheeks, a well marked butterfly. This affection, by itself, is quite common in China.

Differential Diagnosis.—*Syphilitic rupia* is usually associated with marked debility and malnutrition. In this patient there is no discoloration, the general health is excellent, there is no history of other eruptions. No gummata. Legs not involved. The history is too continuous.

Lupus vulgaris.—No t. b. found in the pus. The lesions are much larger than the ordinary lupus lesions, and there are no small scattered tubercles. No pain. The distribution is so general that impaired health would be a certain accompaniment. The scarring is too soft and pliable. It is not present on the face. The self-termination of the disease in the husband and the advanced age of the patient rather against lupus. The lupus erythematosis rather for it.

Lepra.—The patient has not one sympton of lepra and the particular areas of leprous distribution are entirely avoided. Again, the husband recovered and is in good health. (I have not seen him.) The hands and feet are in excellent preservation. The lepra bac. not found. The expression not characteristic, though this woman's face is rather heavy looking.

Epithelioma and psoriasis, also ecthyma and sycosis may be at once excluded.

I am not able to classify this affection as belonging to any of the regular granulomata, nor yet would it be safe to place it in a class by itself as a specific entity. Some of the descriptions, not by any means all, of the Delhi Boil bear a resemblance to the individual lesions. For instance, "Altounyan, of Turkey (*Journal of Cutan. and Ven. Diseases*, June, 1885, VIII, No. 6), describes it as a specific disease beginning, independently of the hair-follicles, as a small acneform papule, pinkish in color and disappearing on pressure. Afterwards it grows deeper, larger and harder and becomes adherent and more vascular. Still it is livid, sensitive, smooth and boggy to the touch. Pus forms centrally and dries into grayish-brown crusts, which are rupioid in character. Beneath is a spongy ulcer, with ragged margin, ovoid contour, and ichorous discharge. Healing followed by the production of a permanent and deforming scar; the entire course of the disease lasting one year. (Diseases of the Skin, Hyde, p. 221). Hyde further goes on to say that the disease is limited to the epidermis and corium, no cryptogamous or other micro-organisms were recognized. The hair follicles and other glandular structures were intact.

Tbere are some points about this description which suggest the present disease, hut the apparent single lesion and shorter duration of the Altouuyan affection, and its reference to an insect bite, would probably prove sufficient to differentiate it from tbis disease, even if we knew the etiology of these present lesions.

Tbe present disease appears to he a benign and very chronic affection of the epidermis and corion of unknown specificity, characterized by the slow and widely distributed development of large pustulo-tuberculous lesions, which tend to heal spontaneously with the excessive and characteristic scarring above described. Pending the hoped for discussion of this case by those who may be interested, and the likelihood of its identity being recognized by others, where I have failed, I would leave the matter, in the bope of heing able to report on the husband of the patieut and the progress of the disease at a later date.

"ACUTE CEREBRO-SPINAL" MENINGITIS IN SHANTUNG.

To the Editor of
THE CHINA MEDICAL JOURNAL,
Shanghai.

DEAR SIR: Below is a report I sent to Tsingtao at the request of the German government physicians there. It may interest your readers.

Sincerely,
C. K. ROYS.

WEI-HSIEN, SHANTUNG, CHINA, *May 16th, 1907.*

In reply to your favor of May 13th I shall be very glad to give you all the facts I know with regard to the recent epidemic near here. An epidemic disease which seems to have heen acute cerebro-spinal meningitis in a very fatal form, about mid-winter, caused a number of deaths at several places in the eastern part of this province. So far as I know, no case has been seen by a foreign physician, first because the disease bas usually occurred at a considerable distance from the Mission stations of the province, and second hecause the disease was so acute tbat the sick had no time to come to such statious for help. So tbe reports of the epidemic, coming through Chinese sources, are more or less unreliable; still enough can be learned to make the nature of the disease fairly certain.

I heard from Dr. W. O. Elterich, of Chefoo, this account of the origin of the epidemic. A Chinese is said to have come home from Vladivostok, landing in Chefoo in a critical condition. He was carried by bearers to his home south-west of Chefoo and died before reaching there. In a few days his bearers sickened and died; then cases appeared among their families, and soon the disease had spread through two villages, namely T'ie-kou and Liao-hsia, in the mountains of Chih-hsia-hsien, ninety *li* or forty-five kilometers south-west from Chefoo, each with a population of four or five thousand.

The spread of the disease seems to have been very rapid in these two vilages, but it did not extend to other villages nearby. This seems to be because as soon as the disease was known, no Chinese would go into the village affected. Several native doctors who went there to sell medicine, are known to have taken the disease and died from it. In one village there were ninety deaths, and in the other fifty or sixty. These facts I verified by talking with an intelligent Chinese student who came through that region in February. The next place the disease appeared, so far as known, was in the southern part of Chang-i-hsien, at Yin-ma, a large market-town near the Hwai-ho. In the whole of Lai-yang and Ping-tu-hsien I have heard of no traces of the disease, although I have made inquiries of a number of people who have been traveling through that region. In that locality and in Kau-mi there has been some kind of a cattle-disease, and much sickness caused by the people eating the flesh of diseased animals. But this is quite distinct from the other and much more fatal trouble.

In Chang-i-hsien there were also two villages chiefly affected. The disease appeared there in January, and although the town of Yin-ma is only seventy *li* from here and about fifteen *li* from the railway, still we heard nothing of the disease until the last of February. At that time a man came to me for treatment from the town of Yin-ma for some minor trouble. I asked him about the epidemic, and learned that about forty deaths had occurred at Yin-ma and about the same number at a village just across the Hwai-ho. Here also the epidemic seemed sharply limited both in extent and in time, for by the end of February there were very few cases and of a much milder type, most of whom recovered. So far as I know these were the only important outbreaks of the disease.

The symptoms are described as of two kinds. One kind was characterized by severe headache, vomiting, weakness and death within a very short time, usually three or four days. There were also red or dark purple spots scattered over the body. In the other type the sick

are said to have had cough with the expectoration of blood in large amounts. Delirium was common in both, and both were very fatal. Of course the reports come entirely from Chinese sources, and no careful examination or microscopical tests were made. Still the picture seems to be a fairly good one of epidemic meningitis, with which the peculiar course and distribution of the disease would coincide.

At present I do not know of any locality where the disease exists in epidemic form. I have heard of one or two suspicious cases west of here, in Poh-sing-hsien, but evidently merely sporadic if they were identical.

Very respectfully,

CHARLES K. ROYS, M.D.

WEI-HSIEN, SHANTUNG.

DOES THE ASSOCIATION FULFIL ITS OBJECTS IN RELATION TO THE PROGRESS OF SCIENTIFIC KNOWLEDGE ?*

By JAMES L. MAXWELL, M.D., Tainan, Formosa.

I believe that, at the present moment, this is a most important question and that for several reasons. But before actually entering on the subject of this paper, I should like to affirm that I do not in any way wish to minimise the central idea of our work, but rather to show that the desire for scientific progress is also an essential to the true ideal of a medical missionary.

I claim to as strong a belief as any that the highest ideal of any man is to help to win the world back to Christ, but we shall fail to do this in the most effective manner if we follow only the fashions of a past age.

Pardon me if I try to work out the simile of an army.

The army has its various divisions—brigades, companies; they all work in harmony to the orders of the Commander-in-chief, and only by acting in harmony can they succeed. Can you imagine a sapper saying that he came to *fight* his country's enemies, not to dig trenches; no, *his* work is to dig and mine so successfully that his fellow-soldiers may quickly be able to strike a blow at the heart of the enemy's encampment—only thus will his cause be successful.

Yet I have myself had the misfortune to meet, at home and in the East, not a few medical missionaries who behave like the sapper I have

* Read at the Conference of the C. M. M. A., April, 1907.

suggested ; they seem to believe that the evangelistic is the only way of attacking the mass of heathenism and superstitiou we have to face, and why they ever became doctors puzzles others and I should think themselves. They probably succeed well, neither as physicians nor as evangelists. Far be it from me to say that a little knowledge should not be used. I believe that much good has been done for the cause of Christ by the wise use of *quinine* aud a few such drugs iu the hands of those who uuderstand how to employ them with discretion ; but that is not what the doctor's scientific training makes him worthy of. If he feels himself unfitted for the physician's work the pity is that he ever undertook it and the sooner he resigns the position the better for himself as well as his patients.

Remember we have a talent—a sacred talent—from our Master to use to His glory and profit. What will He say if we keep that talent wrapped up iu a napkin ? How can our Master say "Good and faithful servant"? No, I believe that it is every doctor's duty to use the highest powers that God has provided him with, to use them to their fullest extent with the utmost euergy he can employ and to lose no opportunity of improving them. I feel nothing but contempt for the missionary who, when you ask him if he uses the microscope, replies that he is too busy preaching the Gospel to examine the blood of his patients.

I do not say that there is not a true and proper place for the former, and it may be that the medical missionary makes a great mistake when he undertakes so much medical work as to exclude or nearly exclude the possibility of personal dealing with his patieuts about their souls' salvation. But what I do hold and hold most strongly is that a Christian man who undertakes the treatment of a patient, be he missionary or not, is doing less than his duty when he does not devote to the treatment of that patient all the knowledge he possesses and all the powers of investigation he has learned or can attain.

Again I say that any physician who is not prepared to do his full duty as a medical is out of place anywhere and most of all on the mission field. And what applies to the study of the individual case of a patieut, applies with equal force to the study and furtherance of medical science in our midst.

We constitute the only corporate body of scieutific workers in the Empire of China, we are scattered throughout the whole Empire aud its former dependencies ; we have thus an absolutely unique opportunity of learning the distribution, etiology and treatment of the diseases which ravage these lands, carrying off in their endemic or epidemic forms hundreds ot thousands every year. We alone have it in our power to

collectively fight these diseases and by effective combination of our scientific knowledge and observation to learn the accurate distribution and rational treatment, without which we can never hope to achieve the ends we have in view or to truly use the powers that God has given us. Are we doing this in regular column advancing against the foe, making slow but steady progress towards the great end; or are we mostly drifting hopelessly, applying rationally or irrationally the remedies we have learnt in our schools and read long ago in our books, while perhaps a few here and there are striving alone in single combat, feeling only too despairingly the hopelessness of such a conflict?

Lastly we are at this moment standing on the verge of mighty changes in this land. The ever increasing wave of scientific knowledge has at last reached these shores, and from all sides comes the claim of the people for scientific teaching. Quite apart from the question of actual teaching, we shall soon have to meet men who are no longer steeped in old superstition and folklore, but who have studied on much the same lines as ourselves and who will be quick to discriminate between the true physician and the empiricist. How are we missionaries going to stand the test? Shall we maintain the reputation which will alone make us effective missionaries as well as medicals, or will the new China have cause to wonder if our religion is as far behind the times as our science?

With this rather lengthy preliminary, let me ask you to consider the main question before us.

The constitution of the China Medical Missionary Association includes in its articles the following aim:—

The cultivation and advancement of Mission work and of the science of medicine in general.

Are we or are we not fulfilling that constitution in its relation to the advancement of the science of medicine? Most emphatically I should say—Not.

One has only to glance at the yearly statistical sheets in the JOURNAL to see how hopeless it seems to move the members of the Association to do anything. That paper never costs any one of us ten minutes' work; it is only the transferring of a few figures from our Annual Report to the vacant spaces on the form supplied. One would imagine that at least ninety-nine per cent. of the hospitals would appear on that sheet, and yet out of 160 hospitals only eighty odd appear, despite the repeated requests of the Editor to send in the necessary figures. I not only sympathise with the Editor. I feel inclined to boil over myself whenever I take up the list of hospitals. What should be an example

of our unity and strength, is simply an absolute proof of our *laissez faire* and weakness. This is not a question of scientific progress; it is simply an opportunity of showing our strength and uniteduess, and even at this we fail miserably.

Still worse do things appear when we begin to consider the progress of medicine and surgery in China as the result of the activities of the members of our Association.

The JOURNAL is a most interesting paper. I always read it from cover to cover and am only sorry it is not longer, but as a JOURNAL showing actual progress in questions medical as propounded by the writers who pen its papers it is an absolute failure. I have glanced over the last six annual volumes, and have found five papers only that can come fairly under this category, and these by only three authors!

We might casually wonder, seeing how little we hear of them, if we really have to deal with so many recondite diseases. As a fact the whole of tropical medicine seems to be teeming with them, and I maintain that for the slackness of us medical missionaries half of these problems might have been solved long ago.

I will quote a few points on which we are still in nearly absolute ignorance, though the questions meet us at every turn.

1. The Geographical Distribution of Disease in China.

I am only too thankful to think that the present Conference is to institute a new era in our knowledge of this subject. But is it not a most absurd thing that after our physicians have been in this country for nearly a century and are present in all, and numerous in nearly every province of the Empire that the knowledge of fifty years ago has hardly been increased? Personally I know of only one attempt to chart some of the diseases in the Empire—that in Scheube's "Diseases of Warm Climates," and his charting consists mostly of daubing the coast of China to a greater or smaller depth with red paint and leaving the North and Interior untouched. The only exception he makes is in the case of Ankylostomiasis, from which disease China and Formosa are supposed to be free. My own experience in South Formosa is that at least ten per cent. of the whole population, and probably a very much higher proportion, are infected. Then we have the case of leprosy, which you constantly see affirmed in home medical papers as being totally absent in North China. I have no knowledge of that district myself, but should be very surprised to find that statement confirmed from reliable sources.

2. Then to quote another point. Splenomegaly and its Causes.

Is there any subject, except it be the fevers of the East, of which we have a poorer knowledge of etiology, and still poorer of treatment

than we have of this disease, and yet to very many of us it is so ubiquitous that no walk even can be taken into the country without these spleens, which their owners carry inches in front of them, being thrust forward into our notice? Is it not a crying shame that no work worth the snap of the fingers has been done in this disease which is probably throughout the length and breadth of this land carrying off thousands every day, if not by its direct morbidity, at least by the diseases it carries in its train, as for example anæmia, cachexia, ascites, anasarca, etc., all of which are so far utterly lacking in proper explanation? Surely our mission as it concerns the bodies of our patients is as much to solve the problems of such serious diseases as to collect huge crowds to our dispensaries, of patients who could as well be treated by our native assistants.

3. Then take the "Fevers" of the East. Again we are in a maze through which most of us, I for one at least, wander hopelessly. Too often we are little better than our own lay colleagues to whom malaria and worms constitute the only two diseases of China, and as likely as not we, without either rhyme or reason, inflict the potent drugs for these diseases on our poor helpless patients.

The acute and continued fevers of the East no doubt contain many different kinds caused by several germs, and not till we can rightly differentiate these shall we be able to apply to them suitable treatment. How is it that in these many years we have hardly yet touched the fringe of this subject.

4. But let us leave these more profound and difficult questions and touch on the familiar subject of the intestinal parasites.

Is it not passing strange that even in this simplest of all the Eastern diseases we have yet come to no conclusion about the toxicity of these pests? I take perhaps an extreme view on the one hand that, but for a passing pain in the abdomen, round worms are absolutely innocuous, except when they poke their ugly noses between the stitches of a sutured bowel. Dr. Logan seems, from the side remarks in some of his very interesting papers, to consider their presence a constant menace. Surely it would not be too much to expect that ere this, with tens if not hundreds of millions in this land suffering from the disease we might have expected the representatives of medicine to have come to a scientific and indisputable decision on this question. And so we might go on through the list of diseases which we are so constantly meeting. To the treatment of which has our Association made any serious contribution?

Now if matters are as bad as I picture, and as I maintain certainly

they are, what is to be done? Something must be done, or our very influence for the Truth will soon be losing its weight.

For who in the rising generation of scientific China will, observing us, walk up the hill Difficulty and the narrow path to Truth, if in our earthly profession they see us walking the broad road of empiricism which leads by the easy path down to Quackery?

Well, it seems to me we have two duties—the Individual and the Collective.

With regard to the Individual.

The duty of every physician is not only to keep himself by the study of books, etc., well abreast of his time, but also to devote his full energies to every case of illness which is brought before him, keeping his eyes well open to the special diseases that the nature of the country makes common. It also is his duty in this twentieth century to apply to all doubtful cases the full extent of the microscopic and bacteriological tests which are in his power. Without this he will fail to treat his cases fairly, and therefore to fulfill the claims which his duty as a Christian missionary doctor demand. In failing to cure cases which are well within his power to treat, he will fail to give the Gospel he has come to preach and exemplify, the position which his duty as a missionary should give it.

Is this a fancied case or a true one? I can give you a very apt example from my own practice. When I took charge of the Mission Hospitals in Tainan, Formosa, nearly six years ago, I had come not very long from home and had little of the special knowledge one requires here. I had to take sole charge of a hospital with 150 beds, with the natural result that the actual keeping of the hospitals going was almost too much of a strain without dipping too deeply into the special diseases I met.

I noticed a large number of cases of anæmia usually associated with enlargement of the spleen and perhaps naturally, put these down to chronic malarial cachexia. So for two or three years I saw many of these cases passing through the hospital wards, little if at all benefited by treatment. Then with the branch hospital off my hands and a more extensive knowledge of the language and experience of the practical work I began to try and get a more scientific grasp of these cases. What was my surprise on examining, first one or two and then more and more of these anæmias to discover the presence of Ankylostomum eggs in the stools till now I have proved that in the more extreme cases probably over seventy-five per cent. are directly due to the presence of these blood-sucking worms; the enlarged spleen being but

a concurrent complaint found in almost all debilitated individuals in these paludial regions. Now looking back on these cases how one views the subject is this: In the past years I have had many cases of progressive anæmia which did not improve in hospital and which a five minutes' examination would have shown to have been profoundly affected by the Ankylostomum duodenale. The patients have passed through the hospital unbenefited, many of them ultimately to succumb to the disease, whereas a simple course of treatmeut would have temporarily relieved or permanently cured their complaint. These patients, owing to my failure in diagnosis, were never in that condition of health to render them easy recipients of Gospel teaching, and they might, by a more scientifically applied treatment, have had a far better opportunity of listening to the Good News to proclaim which our hospital was built. In this way in not applying the powers that God has given me, I have failed in the true end for which I became a missionary. I appeal to you: Is not this reasoning correct? If so then half of my argument is proved aud I only hand it on to you. Have you also failed in your duty?

But some one says: You hold up an impossible ideal with the numbers of cases we are compelled to treat. That opens up a question which I do not intend to deal with in my paper, viz., How far our vast hospitals bugely understaffed are right?

The question is a very difficult one. The amount of suffering is so enormous that even though we may feel the position very far from ideal, we may still claim that in the circumstances we should do all we can. We are, if I may use the simile, like men in small boats with a hundred drowniug people around us. Oue man says I can take only six men safely iu my boat. I will do this aud row ashore as fast as possible, returning quickly for more. The other man says: I will take my boat full of men and in addition as maoy as can hang on to the guuwales without the boat sinking; my progress may be slow, but I fear that many of these must die before my companion could return. Who is to judge between these two men? Who can with any fairness but allow that each may be right iu his own way? And if they will pardon me for saying it, I think that our Editors are a little uufair in their strictures on the men who run big hospitals.

But may I give a word to encourage those swamped in their work? Why don't you make use of the material you have to hand?

No one makes a better pathological clerk than a Chinaman, and what he can do on a minimum of trainiug is simply marvellous. I have iu a few odd hours taught one of my assistants to do a little pathology,

and the result is that except for statistical purposes I never examine a stool myself. I find his report always absolutely correct.

Every tumour removed in our hospital, or doubtful ulcer, is examined microscopically. I never do more than look at the finished slide. I never stain a film for tubercle, leprosy, plague, etc., or do a simple examination of urine. I hope shortly to be able to say the same about blood examinations, but cannot do so yet. We started some cultural work, but have not so far made much of that, though I quite expect that some day we shall be able to do all in that direction that is needed for diagnostic purposes. And what I have managed in this direction any one else can; the time needed for teaching is very small, the results you get back are splendid.

Lastly, over and above our duties to our individual patients, we have a collective duty to them and to the race for whom we work. It is only by recognising this duty and setting ourselves earnestly to find the right way to perform it that we shall succeed in doing the greatest good to the largest number. Just imagine if every medical missionary in China gave only half-an-hour a day to the solving of one common problem of the many which face us, what would not a year do, if not in actually solving the problem, at least in taking us well on the way to the solution. In every department of medicine at home steady, patient, collective investigation is winning the day. Why is it that in this land alone science seems to stand still?

Now what are we going to do?

Well, first of all, it seems to me that we want a very careful knowledge of the distribution of diseases in China. We cannot begin properly to face these problems till we know this. Is there any truth in the local names of fevers? Is there such a thing as a local fever, one for each port for example? What, if any, are the climatic conditions of leprosy, what of splenomegaly? Is beri-beri confined to a few spots on the coast line as Scheube suggests?

Is not Ankylostomiasis a general disease over China? These and hundreds of other questions are waiting a solution before work can really be seriously begun on the investigation of such diseases.

Our Editor is going to enlighten us somewhat on this point, but seeing that getting answers out of medical missionaries is often harder work than drawing molars, I presume his paper will still leave us much to learn. But the Editor will still go on collecting statistics, and there is no reason at all why before the next triennial meeting we should not have an absolutely complete general knowledge of the distribution of the diseases of China.

But I think we might do a good deal more than this. What I would incline myself to propose would be the appointment of an Investigation Committee with power to add to its numbers, which should choose one or more of the subjects of tropical diseases which more particularly call for investigatiou and invite individual members to help by private research and report to the Committee. Further that the Committee might, as the financial condition of the Association permit, employ some of its funds in furthering this work, either by offering prizes for work done hy native stndents, or hy making grants-in-aid for instruments and apparatus needed for carrying on such iuvestigation. I don't know, of course, how far this will approve itself to members of the Association; no doubt far better and more effective schemes might be devised, but above all things let us awake and do somethiug, something more to stem the tide of misery and fulfil the Scripture commaud, "Heal the sick . . . . and say unto them, the Kingdom of God is come uigh unto you."

OUR NEW PRESIDENT.

Dr. George Arthur Stuart was born in "Maryland, my Maryland!"

At a very early age his parents moved to Iowa, a state famous for its numerous schools, fine men and wide exteuding fertile farms.

> "These are the gardens of the Desert, these
> The unshorn fields, houndless and beautiful
> For which the speech of England has no name,
> The Prairies.

He came of Scotch ancestry, pious, vigorous and as insistent as the land from which they sprang. His father is a Methodist minister now over ninety years of age and all his hrothers are in the ministry of the same church. Dr. Stuart received the degree of A.M. from Simpson, one of the colleges of his state and the degree of M.D. from the Iowa College of Physicians and Surgeons. In 1895, during a temporary stay in the United States, he took post-graduate studies at Harvard and received from that university the degree of M.D. *cum laude.*

Dr. Stuart came to China during the autumu of 1886, spending the first few mouths in Nauking. He removed to Wuhu duriug the spring of 1887, and duriug the following year built the Wuhu General Hospital. He continued in charge of the Wuhu Hospital until 1896, when he removed to Nanking to take charge of medical teaching in the Nanking

G. A. STUART, M.D.

President of the China Medical Missionary Association, 1907.

University, and in 1897 succeeded Dr. John C. Ferguson as president of that institution.

During 1897-8 and 9 Dr. Stuart served as editor of the Journal of our Association, and for several years has been an active member of the Nomenclature Committee. In 1905 he was elected President of the Educational Association of China, a position he still holds, and is Chairman of the Terminology Committee of that Association.

He has been active in the affairs of the mission to which he belongs, rendering efficient service in many ways. He has translated into Chinese the Blakeslee Sunday School Lesson system, also the Discipline of the Methodist Episcopal Church and many of the hymns.

While most of his time has been given to educational work he has kept in close touch with the medical profession and its advances. During all the time since his connection with Nanking University he has given more or less time to the instruction of medical students.

Still in the prime of life his associates wish for him many more years of service to China.

R. C. B.

The China Medical Journal.

VOL. XXI. JULY, 1907. NO. 4.

Editorial.

		給	使	但	從	有	謔
		blue-	他	是	脚	兩	蝢
		bot-	has-	Thy-	底	條	蟲
Dedicated	吉福來戲作	tle	ten	mol	行	蝢	詩
to		fly	their	Salts	到	蟲	
O. T. L.		吃	steps	Ep-	bile-	Un-	
		跑	some	som	y-	cin-	
		飯			a-	a-	
		了			rea	ria	

SALVE!

A first and pleasant duty is to thank the members of the C. M. M. A. for the honour they have conferred upon us by electing us to the position of Editors of this Journal. To one the honour is a new one, and he feels that such an occasion should not be allowed to pass without signifying his due appreciation of the honour conferred upon him, an honour combined with an obligation, and one in regard to which he deeply feels his insufficiency. One comforting consideration, however, is that the success of such a Journal depends not merely on the Editors, but in great part, in fact in *greater* part on the members of the Association. It is to you that we are compelled to look for the material to fill our pages, and we therefore call on you to do your part well.

In considering the future of our Journal, which now becomes the MEDICAL JOURNAL, not, however, that the elision of '*Missionary*' means it is to become less missionary in tone or aim, two great objects loom largely before us. What is the end and aim of our Journal? It seems to us that the Medical Journal of the C. M. M. A. should fulfil *two* definite and distinct objects. One of these we may well call the Centripetal, and the other the Centrifugal! It has a duty to perform to the wide circle of medical missionaries scattered

throughout China, and it has a duty to perform to the medical profession at large, and especially to the more scientific portion which is so keenly interested in the study of disease and particularly of tropical diseases. How best to fulfil these two important duties is by no means an easy problem to solve.

Your various sectional Editors will cull from current literature the important notices of advance in the various branches of our profession. In surgery, in medicine, in therapeutics, in midwifery and gynæcology, from issue to issue the salient points will be noted and published under their respective heads. In this way the Journal will perform its centripetal duty and will bring to your notice things we should know and which otherwise we might not come to know. We well know from experience how the few medical magazines we *do* get accumulate week by week and month by month and wait with leaves uncut, and sometimes even with wrappers undone until a favorable opportunity arise to enable us to glance through them, and at times it seems as if the favorable time would never come, and there they lie mutely accusing us! Such is a common experience. Not merely, however, shall we in this way help the medical missionaries by bringing to them from without, but we shall endeavour to keep them in touch one with the other. To enable those in the South to know what their brethren in the North are doing, and to let those of the East know that their friends in the West are not letting the grass grow under their feet, our Consultation and Corresponding columns, as well as the original articles, will help to consummate.

How about the Centrifugal duty? Scattered throughout China, one of the most important countries of the world, are several hundreds of medical missionaries in close touch through hospitals and dispensaries with the diseases of the country. The resources of China from a financial and material standpoint are little known, and even less known are the diseases of its people. Some of these are peculiar to the country, others while common elsewhere, yet in China present peculiarities and modifications not found in other countries. With such opportunities as are afforded to us surely the medical missionaries in China have not in the past fulfilled one side of their duty in the matter of *research*. With such boundless opportunities for investigation we should surely be able to throw

light on many points connected with the causation, development, and treatment of disease.

We are far from saying that nothing has been done. One has but to read through the pages of our Journal for the years that are past to find evidences of research on the part of some. One medical missionary at last has the honor of having a disease named after him. Others have from time to time published in our pages interesting notes of rare cases, or of strange finds they have come across in the course of their routine work.

When all is said that can be said, and we do not wish to minimise in the least what has been accomplished, still it must be confessed we have not done our duty, "We have left undone that which we ought to have done."

We trust our Journal will be the means then of conveying to the medical profession at large the result of our future researches. Amongst our number are scientific men, men trained and qualified in the world's best schools and under the leading teachers of all countries. A glance at the list of our members and their qualifications is sufficient to convince us that we *have* the men for the work, and we look to them for the material. We need not point out the immediate advantage accruing to ourselves in our work in China and the higher position we shall hold in the medical world as the result of our Research Reports.

The Central China Branch of our Association has added another good deed to the many by initiating at the suggestion of its President, Dr. S. R. Hodge, a Research Committee, and the parent Association has at its general meeting adopted a similar plan. From time to time reports of these Committees will he published, and we look forward eagerly to putting them before our members and the medical profession at home.

We well know from experience how the laboratory work is limited and curtailed by a thousand and one things which crop up in the hospitals and dispensaries. Still we all can snatch a few brief hours a week and spend them over the microscope and incubator. Every little tells! Will not all do their little best!

In such ways our Journal will fill its proper place and be a credit and an inspiration to us all!

A GREAT GIFT TO CHINA.

We feel that we are now about to say editorially what is among the most important messages that we have yet been called upon to deliver in this capacity. We would therefore say what we have to say, simply and directly and without any fine writing, to those concerned, to the members of the Association.

Beginning with Dr. Kerr, individual members of this Association have devoted much time and money to the translation of scientific medical books into Chinese, a language recently without even a scientific vocabulary, let alone a scientfic literature. Later on the work of these pioneers was recognized by the Association, and it was decided to make their work ours—our united work, our united interest, our united responsibility; and we have done so from that time to this. Already we have eleven standard medical books on sale, a fairly complete medical vocabulary and a dictionary in press. Three or four more books are ready or in the printer's hands and others in preparation. We have a devoted Editorial Secretary and contemplate an Association Chinese Medical Journal.

In a very true sense the foundation of a Chinese medical literature is now laid, and it has been the free gift of the China Medical Missionary Association to China. And there is no other body of men on earth at the present time which could have done this thing—Chinese, Japanese or any other race. It required students, medical men teaching medicine and having a thorough knowledge of Chinese and some European language. There is no other set of men with the requirements for this work on earth.

Besides the scientific knowledge and time, and the linguistic requirements which we have devoted to this work, it has, so far, with little outside help, been financially carried on by the personal gifts of members of the Association supplemented by the sale of the books, and it may be a real and living source of satisfaction to each one of us that we have been in the unique position to do this thing, in many ways the greatest step yet in the gift of our great profession to China, and that we are doing it.

The immediate future has these duties in store for us. To raise the funds needed to pay the house and writer expenses of our

Chinese Editorial Secretary, Dr. Cousland, whose time is too unspeakably valuable to be eaten up in the uncertaintities of unassured support; and the provision of funds to push the publication of new books as well as to complete that of books already in press. To do this we must lead off in the matter by a personal gift, at a sacrifice if need be, and by a distinct effort on the part of each of us to put the matter before such home secretaries and friends, especially broad-minded medical men, as will interest them to the point of finaucially helping in the matter. For this year something like four thousand silver dollars is needed: two thousand for translation expenses and the same for publication. What will you do with the enclosed subscription blank? The list of member's subscriptions for this year to date is as follows:—

SUBSCRIPTIONS TO THE PUBLICATION COMMITTEE FUND.

Dr. Christie	$20	Dr. Palmborg	$5
,, Cousland	20	,, Hoag	5
,, Jones	5	,, Jefferys	10
,, Meadows	5	,, Hodge	2
,, Butchart	10	,, A. W. Tucker	10
,, Churchill	5	,, Davenport	10
,, J. Maxwell...	10	,, Worley	5
,, Beebe	10	,, Sjoquist	5
,, Whitney	10	,, Selden	10
,, Plummer	20	,, Weir	5
,, Hogg	10	,, A. Young	10
,, Henry	2	,, B. V. S. Taylor	5
,, Swan	5	,, Menzies	5
,, Macleod	10	,, Avison	5
,, Carleton, for S. M. Hospital	20	,, Kilborn	10
,, Polk	5	,, Wilkinson	10
,, Shields	5	,, Boone	5
,, De Vol	3	,, Grant	5
,, McAll	5	,, Hart	10
,, Mack	5	,, Evans	5
,, R. S. Hall	5	,, Woodward	15
,, Gotteberg	2	,, Reifsnyder	5
,, Cattell	3	,, S. C. Lewis	5
,, Edmond	2	,, J. P. Maxwell	10
,, Seymour	2	,, Eubank	10
,, Tribe	10	,, Worth	10

Dr. Mills	...	...	$5	Mr. Osgood	...	...	$5
,, Venable	...	...	10	,, Hanlam	...	...	5
Mr. Leas	...	...	10	,, Smith	...	...	5
,, Fikes	...	...	5	Dr. W. H. Park (Hospital)		...	20
,, Lyell	...	...	5				
,, de Blois	...	...	5				$476

Also per Dr. Wittenberg, Tls. 55.

OUR CHINESE NAME.

The matter of a Chinese name for the Association and also for the Journal was discussed at the Conference and finally handed over, and very rightly so, to the Terminology Committee for settlement. It did not prove an easy matter to decide, and the several names submitted by various members of the Association were most courteously "chewed up" by the more select council with the following satisfactory result. Dr. Cousland writes us: "After a lot of discussion and consultation we have decided to recommend as the names of the C. M. M. A. and C. M. J. the following. If you approve we may consider them as fixed." (This last remark is pure "K'e-ch'i," as we have no authority in the matter. We always have a SAY in every matter.)

China Medical Missionary Association, 博醫會.
China Medical Journal, 博醫會報.

The alternative was to prefix the characters 同仁 to express our benevolent missionary aim, but it is thought that the short title is the better especially in connection with Journal or Committee.

So we are the "Po I Hui Pao." All right! We suppose we can stand it and even thrive thereunder. At any rate we have so far added "to our face" thereby. (See cover.)

THE SERAMBAN DRUG.

It appears from a Reuter telegram. (We quote from the *North-China Daily News* of May 30th):—

THE QUESTION OF A CURE.

LONDON VIA BOMBAY, *May 28.*

"Mr. H. Pike Pease (Unionist Member for Darlington) has asked for the appointment of a committee to investigate the reported discovery of a remedy for opium-smoking in Selangor. Mr. Winston Churchill stated that the government analyst of the Straits Settlements had been unable to find any special constituents in the plant from which a decoction could be made. The Imperial Institute was conducting a further analysis, and pending the results of this, the Uuder-Secretary of State added, the appointmeut of a committee was premature.—*Reuter.*"

The Imperial Institute which has done so much for science in general, and our knowledge of beri-beri in particular, is investigating the Straits Settlements drug so much talked of as a new cure for the opium habit. The report of it which Mr. Hinman gave at the conference was not promising, since it was directed to be prescribed with a certain fairly large quantity of opium ash, known to contain cosiderable active opium, and given in this combination until the cure was effected. (See Conference Minutes, C. M. J., May 1st, 1907.)

If in addition to being prescribed with opium the drug proves to have "no special constituents" we should regard the whole thing as a fraud, or at least a complete failure.

We have had far too much, in China, of sure cures for the habit containing this, that and the other preparation of opium or its alkaloids, and we are, speaking for the sentiments of the Conference and ourselves, through with them. To say that we regard any opium cure containing any form of opium other than in the light of a form of the reduction treatment, is putting the thing mildly. Opium ash may have the advantages of being unpalatable and the Seramban drug may make it more so, but we can hardly imagine that the combination would be any improvement over a known strength of the tincture combined with a judicious suggestion of assafœtida.

SIGNED EDITORIAL.

We would again ask the attention of the members of the Association to the inset in the last number of the Journal, calling for an investigation into the question of intestinal infections with animal parasites.

Most earnestly do we beg that individual members take the matter up seriously and give the subject at least some small portion of their time.

This is not a question of academic interest alone, but one urgently calling for immediate investigation.

People round us whose lives might be saved are dying because of our want of interest in this matter. This is certainly true for many of us; it remains your duty to prove this is not the case in your region.

To give an example:—A woman who had come with her husband to Shanghai, was seen and examined many times by a physician in that city, who finally sent her home to her native place to die.* There she was found to be suffering from Distomiasis, but treatment, though causing temporary improvement, was too late to save the patient's life!

We have ourselves seen the same thing happen again and again in our own practice in cases we now know to have been ankylostomiasis till we learnt the necessity of the examination of fæcal contents in all cases of difficulty and especially in those of anæmia, ascites, anasarca, etc.

We want to place this question not so much on the minds as on the consciences of our brethren until they have proved, by the microscopical examination of stools, that these diseases are absent from the region in which they work.

Lastly there is some reason to believe that Ningpo and its surroundings are an endemic area of Distomum infection; we would ask our brethren in this region to pay special attention to this subject about which almost nothing is known at present.

JAMES L. MAXWELL.

* Note.—(Well, she did it! Ed., Shanghai).

FECAL CHART FOR CHINA.

PREPARED BY THE "RESEARCH COMMITTEE OF THE C. M. M. A."

The following acknowledgments are due: Stengel (Pathology), Ziegler (Pathology), Cattell (Autopsies), Jakob (Internal Medicine), O. T. Logan (Original Sketches), W. H. Jefferys, ditto.

Worm Eggs.

A. Ascaris lumbricoides, x 400.
B. ,, ,, unfertilized egg, x 400.
C. Oxyuris vermicularis, x 400.
D. Fasciola hepatica, x 400.
E. Bothriocephalus latus, x 400.
F. Trichocephalus dispar, x 400.
G. Ankylostoma duodenale, x 400.
H. Taenia solium, x 400.
I. Taenia saginata, x 400.
J. Dicrocoelium, x 400.
K. Schistosomum hæmatobium, x 400.
L. Disomum ratouisi, x 400.
M. Schistosomum Japonicum, x 400.

Worms.

N. Trichocephalus dispar, x 2½.
O. Oxyuris vermicularis, x 2½.
P. Ankylostoma duodenale, x 2½.
10. Tænia saginata, segment natural size.
11. Tænia soliuu, ,, ,, ,,
12. Bothriocephalus latus,, ,, ,,

Q. Trichomouas intestinalis.
R. Cercomonas intestinalis.
S. Amœba coli.
T. Hooklets, Tænia echinococcus, x 450.
U. Yeast fungi.
V. Ammonio magnesium phosphate crystals.
W. Ephithelial cells.
X. Vegetable matter.
Y. Leukocytes, fecal refuse, etc.
Z. Muscle cells.

Relative size.

1. Red blood cell.
2. and 3. Amœba coli.
4. Trich. dispar.
5. Ankylos. duod.
6 Ascaris lumb.
7. ,, ,, unfert.
8. Schistos. japon.
9 Fasciola hepat.

LIST OF BOOKS.

Braun. Parasites of Man ... ... Bale, Sons & Danielsson.

Stiles. Illustrated Key to the Trematode Parasites of Man. Hygienic Laboratory. Bulletin No. 17.

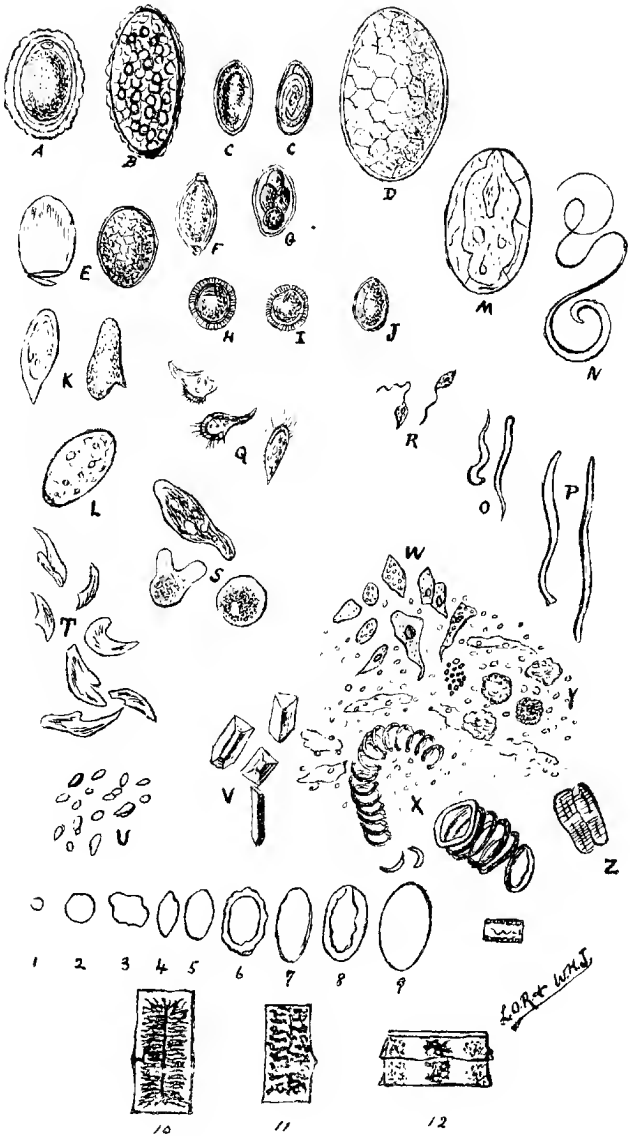
Monier. Traité de Parasitologie animal et végétale appliqué a la Médicine. Ballière et Fils, Paris.

Scheube. Diseases of Warm Climates ... ... Bale, Sons & Danielsson.

Manson. Tropical Medicine ... ...Cassell & Co.

Daniels. Laboratory Studies in the Tropics ... ... Bale, Sons & Danielsson.

Jackson. Tropical Medicine ... ... Blakiston, Sons & Co.



FECAL CHART FOR CHINA

CENTENARY CONFERENCE RESOLUTIONS.

MEDICAL WORK.

I.—Whereas, The Church has the authority of Scripture and the example of Christ for using the healing of the sick as a means of the revelation of God's gracious purpose towards mankind; and

Whereas, The view taken of the function of medical missions in the Church has an important bearing on their efficiency and success;

Resolved:—That this Conference recognizes medical missions as not merely an adjunct to, but as an integral and co-ordinate part of, the missionary work of the Christian Church.

II.—Whereas, Medical missionaries are sent forth as messengers of the Church and ambassadors of Christ; and

Whereas, The recognition of this adds largely to their influence and usefulness;

Resolved:—To recommend that medical missionaries should receive their commission from the Home Churches and Societies in a public and unmistakable way, and be solemnly set apart as missionaries of the Church.

III.—Whereas, The medical missionary in China must frequently carry on his medical and surgical work without assistance and under difficulties not experienced in home lands; and

Whereas, The success or failure of this work has far reaching effects on the advance of Christ's cause; and

Whereas, The Christian Church should give of her best to God's service;

Resolved:—To recommend that no partially trained men or women should be appointed to undertake responsible medical work, and that medical missionaries should have the best possible professional training and equipment, so that the work done may be of a high standard.

IV.—Whereas, It is of the highest importance that the medical missionary should have a good knowledge of the Chinese language, spoken and written, and should early gain some experience of existing mission methods;

Resolved:—To emphasize the advisability of relieving him of all responsible work during his first two years in the country, of requiring him to pass examinations not less searching, if on different lines, than those of his clerical colleagues, and of locating him for a time in an established medical centre.

V.—Whereas, The primary aim of the work of the medical missionary is to make known God's saving grace to man; and

Whereas, He must necessarily have more influence on his patients than any one else can have;

Resolved:—(a) To recommend that all evangelistic work and agents in the hospital be under his direction, and

(b) To impress on medical missionaries the importance of personally superintending this work and taking active part in it.

VI.—Whereas, Experience shows the hospital to be the most fruitful and satisfactory sphere of medical mission work professionally, practically, and spiritually, as well as the most economical;

Resolved:—(a) To recommend that medical missionaries concentrate their energies as much as possible on indoor patient work; and

(b) That two medical missionaries be attached to every large hospital.

(c) To urge the Churches to develop this branch by an increased support of mission hospitals.

VII.—Whereas, Medical missions are an essential part of Christian missionary effort; and

Whereas, It detracts largely from the usefuluess of the missionary if he is hampered with the responsibility of finding the means of support for his work by private practice or otherwise;

Resolved:—(a) To urge the churches to give full support to their medical missions and to free missionaries from this financial burden, while leaving it to them to make what efforts they consider advisable to gain local self-support and

(b) To urge the Chinese church to rise to her responsibility and privilege in this matter.

VIII.—Whereas, Inquirers and applicants for baptism amoug hospital patients from a distance are frequently lost sight of and relapse into heathenism for want of continued instruction;

Resolved:—To urge the various missions to make provision for following such cases to their homes and for introducing them to the nearest chapel and Christians in the neighbourhood.

IX.—Whereas, The work gathering round our Mission hospitals cannot be fully overtaken by foreign physicians without well trained native assistants; and

Whereas, There are now many openings which might with advantage to the cause be occupied by Chinese Christian medical men and women;

Resolved :—To urge the various Missionary Societies to unite in establishing thoroughly equipped medical schools in several of the large mission centres.

X.—Whereas, There is a pressing demand for standard medical text-books and other medical literature in Chinese for the use of native hospital assistants and medical students ;

Resolved :—To request Missionary Societies to hold themselves in readiness temporarily to set free, or to unite in the support of one or two medical missionaries, as suitable men are found, for translating and publishing medical works, and also to secure to those who teach in medical colleges time and opportunity for the preparation of text-books.

XI.—Whereas, The Conference recognizes with thankfulness that the recent action of the British and Chinese Governments concerning the opium traffic, and the measures already promulgated for the suppression of the opium habit, give reason for hope that China may ere long be freed from this curse, and that the numbers seeking medical aid to renounce the vice may in the near future be largely increased.

Resolved :—(a) To urge on missions throughout China that they should seek more energetically to combat this great evil in every possible way; that they should extend the work of opium refuges; and that they should above all make prominent in all their efforts and in each individual case the power of Christ as the only sure hope of permanent salvation from the degradation of this vice.

(b) To urge Christians in all lands where numbers of Chinese are living, earnestly to co-operate in securing public sentiment against the sale and use of opium.

XII.—Whereas, The John G. Kerr Refuge for Insane established in Canton in accordance with the approval of the Missionary Conference of 1890 has, by God's blessing, met with marked success, and whereas no rational treatment is provided by the Government or people for this numerous and afflicted class throughout the empire,

Resolved :—That this Conference recommends the establishment of at least one similar institution in each province where full government protection can be obtained.

XIII.—That this Conference urges upon missionaries in the vicinity of leper communities to take steps that the Gospel shall be preached to the inmates and would earnestly request the Mission to Lepers to further extend its work amongst the lepers in this empire.

XIV.—That this Conference records its warm appreciation of the help rendered to mission hospitals hy the Chinese officials and merchants, the foreign commercial communities and the European doctors residing in various parts of the country.

XV.—This Conference resolves to record its thankfulness to Almighty God for the ahundant hlessing bestowed on medical missionary work in the past, and in view of the many millions in China still untouched by the Gospel, and the appalling amount of preventable suffering from disease which calls so loudly to the Christian Church for relief, appeals earnestly to the Home Churches to send forth more men and women, fully qualified and fully consecrated to carry on and extend this work.

XVI.—*Resolved :*—That the Conference instructs the Committee on Medical Work to convey the ahove resolutions on this subject to the Home Boards represented in China.

Medical and Surgical Progress.

Tropical Diseases.

Under the charge of J. PRESTON MAXWELL, M.B., B.S., F.R.C.S.

THE PREVENTION OF PLAGUE.

Dr. Turner, of Bombay, has written warmly recommending the use of "l'huile de schiste," a residue of the distillation of crude petroleum as a plague disinfectant. It is a thoroughly efficacious flea destroyer. To disinfect a room this material is sprinkled on the floor before moving the furniture in order to catch any fleas dislodged during removal. Then the room having been emptied, with a brush the disinfectant is spread over ceilings, walls and floor and left for twenty-four hours. It does no damage except to oil painted walls.

It is also cheap and so is fit for general use.—*B. M. J.*, January 5th, 1907.

THE ATOXYL TREATMENT OF SLEEPING SICKNESS.

Several papers on this subject have been lately published.—*B. M. J.*, February 2nd, 1907, and December 22nd, 1906.

In the latter paper the treatment by the "colours of benzidine" is discussed and apparently trypanroth seems to be of some value. But of all the methods of treatment that with *atoxyl* seems to be the one which at present holds the field. Unfortunately even with this drug the successes are only partial and temporary. Whilst undoubtedly ameliorating the symptoms, on discontinuing the treatment these quickly recur, and it is pretty clear that it cannot in any way be termed a specific cure.

Pathological Notes.

Under the charge of JAMES L. MAXWELL, M.D.

A URINARY TEST FOR HELMINTHIASIS.

A Russian physician, Dr. Iéfimor, affirms that he has discovered a sure sign of the presence of intestinal worms. From five to ten cubic centimeters of fresh urine (which need not be filtered unless it is turbid) should be boiled in a test-tube, and from five to ten drops of the official solution of *acid nitrate of mercury* added.

If the individual is free from worms the urine becomes milky and deposits a white precipitate; if he has worms, the precipitate is greyish or blackish—darker if the parasite is a tape-worm, lighter if it is a round worm, though the difference is not decided enough to be diagnostic. It must be ascertained that the person has not recently taken an alkali, a sulphur compound, Dovers powder, certain preparations of iron, or any compound of lead, for any of these may enable the mercurial to throw down a similar precipitate. Dr. Iéfimor supposes that the reaction is due to a toxin elaborated hy the parasite, absorbed into the blood, and finally eliminated in the urine.

Note.—The Editor of the JOURNAL has tried this reaction and found it to act.

THE STAINING OF ANIMAL PARASITES.

By I. WALKER HALL, M.D.

British Medical Journal,
March 9, 1907.

While many of the higher parasites do not require any special staining in order to demonstrate their anatomical structure, their ova and embryos may sometimes escape detection when unstained, especially if they are preseut in small numbers.

This is particularly the case when it is necessary to examine secretions such as the urine or feces, or the contents of parasitic cysts. Staining is also an advantage in demonstrating embryos, ova or sections of the entire animal, either by the aid of the microscope or lantern microscope.

The following device was employed, and as in its entirety the procedure does not appear in the available literature, it is here described, in the hope that it may obtaiu further application:

Method.

1. Prepare a film of the blood, fæces or sediment of the secretion. Fix by heat, or, less preferably, by formalin vapour.

2. Treat the film with the following solution half to two minutes: Watery methylene blue, one per cent. 100 ccm.; glacial *acetic acid*, five ccm.

3. Wash in water.

4. Cover the film with saturated alcoholic eosin solution. Allow to stain for five to ten minutes, or heat over the flame, blowing out the alcohol each time it catches fire until the film is almost dry.

5. Wash in water.

6. Fix in potash alum solution half to two minutes.

7. Decolourize in ninety per cent. alcohol till a uniformly pink colour obtains.

8. Wash in water; allow to dry; mount in Canada balsam.

KALA-AZAR.

To those wishing to read a concise and very readable account of this most important disease we would strongly recommend the Milroy Lectures of the Royal College of Physicians of London by Dr. Leonard Rogers, published in the *British Medical Journals* of February 23rd, March 2nd, and March 9th, 1907. From the last of these papers the following few notes on the pathology of the disease is culled.

Distribution of the Parasite in the Human Body.

It soon became apparent that the organism may be found in practically every orgau in the body in variable numbers, although most numerous in the spleen, bone marrow and liver. They were also occasionally observed in the mesenteric glands, and more rarely in ulcers in the intestines.

Recently Donovan has reported that he has found the parasites in the peripheral blood of seventy-five per cent. of his cases, while Patton has detected them in a still larger proportion of specially selected advanced cases. It is doubtful if a microscopical examination of the finger blood for the parasites will prove of much diagnostic value in the difficult early stages of the disease. However this may be, it is now quite clear that the parasites are at least present in the circulating blood in large numbers in most advanced cases, quite sufficiently to readily allow of their euteriug the stomach

of any blood-sucking insect which might form a suitable host for their further development.

Cultivation and Development of the Parasite.

All first attempts at cultivation in citrated blood proved failures, the parasites all dying out in a day or two and no advance was made in this till incubation of the cultures at a low temperature was tried. This at once proved successful, and it was found that with a uniform temperature 22° C. the parasites multiplied rapidly and many developed the flagellated forms. There is never, however, any sign of an undulating membrane and the conclusion is that the parasite is not a partially developed trypanosome, but another kind of flagellated organism not yet classified.

The rapid increase in the flagellated forms can be still further stimulated by an addition of weak sterile acid solution to the culture. The acidity thus produced corresponding to the amount of acidity of the stomach contents of the bed-bug. On the other hand, no growth took place in sterile water or in any medium infected with pyogenic organisms, thereby combating strongly the idea that infection can take place either through the faeces or by water.

So far direct experiments with the bed-bug have not met with any success, but such experiments have been very limited and incomplete, and Dr. Rogers inclines to the belief that the bug will eventually be found to be the transmitter of the disease.

Surgical Progress.

Under the charge of J. PRESTON MAXWELL, M.B., B.S., F.R.C.S.

THE TREATMENT OF FURUNCLES.

One of the features of the present development of medical and surgical skill has been the recent researches into opsonins and their relation to disease.

One of the most annoying class of cases with which the surgeon has to deal is that of constantly recurring furuncles. French (*B. M. J.*, February 2nd, 1907) deals with this question and points out the value of obtaining the opsonic index in these cases with a view to their treatment with staphylococcal vaccine. He gives the method used for the preparation of this remedy and discusses its value in tuberculous affections, acne and furuncles. In acne the results having been well worked out it does not seem necessary to obtain the opsonic index for each case.

THE TREATMENT OF LARYNGEAL CANCER.

In the *B. M. J.*, November 24th, 1906 and February 2nd, 1907, there are several valuable papers on Laryngeal Cancer.

Thyrotomy has now fully established itself as the operation of election in the case of intra laryngeal growths and discussion mainly centres around the technique. Some operators do not suture the wound at all and some use solutions containing suprarenal extract for painting after opening the larynx. On the other hand, many object to the suprarenal extract as causing more subsequent bleeding and prefer to use *cocaine* only.

With regard to the use of a Hahn's canula or some such device for preventing the passage of blood into the trachea, many now dis-

pense with such aids and depend on posture and an able assistant to guard against such an accident.

With reference to the partial or complete extirpation of the larynx authorities still are by no means agreed either as to the benefits or even the justification of the complete operation. The initial mortality of the latter procedure, though greatly reduced, is still very high, and the subsequent condition of the patient in many instances is very miserable. As to the subsequent voice most of the patients develop a buccal voice which the majority of outsiders can easily understand.

As to the technique of these severe laryngeal operations full details are given in Jackson's paper.

With regard to the previous removal of a portion of growth by intralaryngeal forceps as a help in diagnosis authorities are not fully agreed. Probably it is best not to remove a piece unless the patient has previously consented to the larger operation if deemed necessary. If he has consented then removal of a piece may definitely decide the question of malignancy.

Progress in Internal Medicine.

Under the charge of EDWARD H. HUME, M.D.

TREATMENT OF INFECTIOUS DISEASES.

It is hardly necessary to say that the successful treatment of these diseases will be tremendously helped as the knowledge of their etiology becomes greater and as it becomes possible to locate the seat of the activity of the etiological parasite if such there be. It is therefore only necessary to say a word calling attention to the great importance of blood cultures. The making of these is a very simple matter if one can command the use of an incubator. A recent article by Dr. Rotch (*Journal of the American Medical Association*, January 19th, 1907) dwells on the importance of blood cultures in the diagnosis of children's diseases. In the examination of typhoid cases such cultures gave positive results in eighteen of twenty-one cases. Tuberculosis has also been positively diagnosed by blood culture. In scarlet fever streptococci are being found with increasing regularity in the blood. And finally in pneumonia and in epidemic cerebro-spinal meningitis, it is believed that the causative organisms may be regularly found in the blood if the disease is really present.

TREATMENT OF DYSENTERY.

Vaillard and Dopter (*Annales de l'Institut Pasteur*, 1906, XX, 321, quoted in *Progressive Medicine*, March, 1907) report their experience in the preparation and use of anti-dysenteric serum. It was prepared by the alternate injection of living bacilli and their toxins into horses. When one recalls the intensely severe constitutional symptoms often seen in dysentery, and only partly explained by the loss of blood and diarrhœa, the importance of some means of combating the toxic elements of the disease becomes evident. Perhaps the toxic are more important than the infectious elements. Their series of cases numbered ninety-six adults treated with serum only. The cases varied in severity; those with fifteen to thirty stools a day being classed as moderately severe, with thirty to eighty stools as severe, with eighty to 150 as grave, and

with over 150 as very grave. "The dose of serum was from 20 to 100 c.c. The action was prompt and the pain lessened or disappeared within twenty-four hours, except in the worst cases: the stools lessened in frequency and ceased to be bloody." In one case that entered on the fourth day, with over 140 stools per day, twenty-five c.c. of serum were given, and the next day the stools were less than fifty. Then fifteen c.c. of serum were given, and the following day the stools were only five. The conclusion is that the serum of horses, prepared according to their method, is both anti-microbic and antitoxic. The serum is harmless to human beings, even in large and repeated doses, is a specific means of treating bacillary dysentery and is without effect upon other forms of dysentery. The dose varies with the intensity of the infection and the intoxication. Naturally the effects are the prompter and more striking the earlier the serum is used. It is valuable, however, when given even as late as the sixteenth day. In regions where both bacillary and amebic dysentery prevail, the effect of the serum would be a means of diagnosis; it having no effect on the latter form.

A similar series of cases is reported by Lüdke *(Deutsch. Med. Woch.*, 1906, XXXII 181, quoted with the previous case). The results corresponded closely with those just mentioned, and had the additional advantage that the diagnosis was made positively by culture from the stools before the treatment was carried out.

It will be very satisfactory to those of us who live in the Far East to know that an excellent anti-dysenteric serum can be obtained from the Government Institute for the Research of Infectious Diseases, Tokio, Japan. It is handled by M. Shiohara, wholesale druggist, Tokio. The time may be not far distant when we shall be treating dysentery as rationally as we now can treat diphtheria.

TREATMENT OF MALARIAL HEMOGLOBINURIA.

Vincent (Comptes-rendus Societé de biologie, 1905, LIX, 633, quoted as above) regards malaria as the fundamental condition in cases of hemoglobinuria, but not as a sufficient cause till *quinine* is given. He reports the use of sixty to ninety grains of *calcium chloride* per day, regarding it as a strong anti-hemolysin. In some cases, he has been able, at will, to excite, prevent or arrest an attack of hemoglobinemia by using *quinine* with or without *calcium chloride*. He has shown that *calcium chloride* has the same power *in vitro*, and by means of one or two drops of a ten per cent. solution they have been able to stop hemolysis in a solution in which red corpuscles otherwise undergo rapid and complete solution. It seems perfectly clear that the above treatment is not intended in any way to supplant, but rather to supplement the treatment with *quinine* given by intramuscular injections.

TREATMENT OF PNEUMONIA.

Anders *(Medical Record*, July 7th, 1906) cordially recommends the fresh-air treatment of pneumonia. The advantages are the combined effects of lowering the temperature, a bracing tonic effect on the nervous system, supplying the patient with oxygen. There is no danger of the patient taking cold. The dyspnea, cyanosis, restlessness and insomnia are all improved. It is, of course, hard on the nurse.

In tbis connection, Dr. R. B. Preble (*Progressive Medicine*, March, 1907) makes a strong protest agaiust the use of pastes and poultices on the chest. He saw a woman breathing forty to fifty per minute because of pneumonia, and wearing on her chest a poultice weighing three pounds. It was easy to calculate that she was lifting with her chest 135 pounds per minute, and sometbing over four tons per hour. This additional work far outbalanced any questionable benefit that may have been derived from the moist heat of the poultice.

TREATMENT OF SCARLET FEVER.

Royer (*Pennsylvania Medical Journal*, January, 1907) describes the results of a study of the renal condition of 800 cases of scarlet fever, which were treated with routine doses of *chloral hydrate*, as compared witb the condition of the kidney iu 756 cases having tbe usual remedies. The study was the continuation of an earlier one made by Dr. Wilson, who came to the conclusion that an increased diuresis was secured tbirty-six to forty-eight hours after beginning the use of *chloral hydrate*. He thought that in some way tbe drug protected the functioning part of the kidney tissues, that nervous symptoms were greatly modified, that itching was allayed, and the patient generally more comfortable. In Dr. Royer's series those receiving *chloral hydrate* were given quantities sufficient to produce light somnolence, and this was continued for five or six days after the fever subsided; the same dose being used. The otber series (of 756 cases) received no *chloral* except very occasionally, for special symptoms. All cases were excluded in which other infectious disease or other serious illness was combined with scarlatina. Three died in the cbloral group, and four in the usual remedy group. During the febrile period no difference was found in the number of tbose having mild, transient, or severe nephritis. In the post-febrile period there were 4.25 per cent. in the chloral group and 5.68 per cent. iu the usual remedy group tbat bad post-febrile albuminuria. The total of all forms of post-febrile nepbritis was 5.5 per cent.; in tbose having chloral hydrate, as against 7.76 per cent, in the other group, a saving of 2.17 per cent. of post-febrile nepbritis. Royer concludes that a more extended use of *chloral hydrate* is justifiable in tbe treatment of scarlatiua.

Correspondence.

To the Editor of

"THE CHINA MEDICAL JOURNAL."

DEAR SIR: In consequence of having left Hankow to commence medical work at Tayeh I have felt obliged to resign from the position as Secretary to the Publication of "Leaflets on Hygiene in Chinese," issued by the C. C. M. M. A.

For the demands and success of such a work it is essential that the Secretary should reside in the Centre.

Dr. J. G. Cormack, London Mission, Hankow, has kindly undertaken the work, and to him all future communications should be addressed.

I am,
Faithfully yours,
W. ARTHUR TATCHELL.

TAYEH, HUPEH.

DEAR SIR: I sent you some time since a Programme for 1907 of the C. C. M. M. A., and I am just sending now a few lines to report progress.

We have had three meetings so far, and all of them have been of much interest and practical importance. At the first meeting, Dr. Hodge gave the Presidential Address, taking for his subject. "The Possibilities of Scientific Research in Medical Mission Work." The address was an inspiring one, and arising out of the discussion that followed, it was decided to form an Investigation Committee to take up unitedly research on different subjects of medical and surgical interest. This Committee has met and prepared a series of questions in a tabulated form on the subject of "Fæces," which they are taking up as the subject of their first investigation. These questions will be sent round to the members of the Association, and then the collected results published later in the JOURNAL.

Dr. McAll gave us a very practical paper recently on "Injuries and Disease affecting the Region of the Hip Joint." Then we had a very practical paper from (Mrs.) Dr. Rowley on "The Possibilities of Training Native Nurses in our Hospitals." A most interesting discussion followed, and as an outcome it was decided that the Association should have a course of study for nurses and a scheme of examination drawn up. A Committee was chosen to carry out this and report at a later meeting of the Association. We may therefore expect that before many years have passed, Central China will have a goodly number of trained and certificated nurses.

We have not yet had many purely clinical meetings, but the cases shown at the usual meetings have been of much interest.

I am,
Yours fraternally,
J. G. CORMACK.

LONDON MISSION,
HANKOW, *May 10th, 1907.*

DEAR DR: Just a line or two to let you know that after a good furlough in the old country, I am now back again and at work in Heng-chow (Southern Hunan). The re-opening of the work here has been most encouraging—patients coming round in good numbers and showing an eagerness and confidence that surpasses anything I have seen be-

fore in Heng-chow. As formerly, a very large proportion of my cases have been ophthalmic, and the majority of our operations, so far, have been on the eye—pterygium, entropion, iridectomy, cataract, etc.

I have been very interested lately in looking up some of the back numbers of the JOURNAL, and especially pleased to find that tropical medicine is coming so strongly to the fore. While in England, I took the opportunity of taking out a full course at the London School of Tropical Medicine, and had the pleasure of working side by side with my old friend, Dr. R. T. Booth who, I am glad to see, has been recently elected to the editorship of the JOURNAL, together with yourself. To those about to go home I should say: Don't fail to take out the course at the London School of Tropical Medicine. It is hard work (five hours a day in laboratory, besides lectures, bed-side clinics, post-mortems, etc.), but it is well worth it. One gets a facility in handling the microscope that can only come from such constant practice as the school affords, and this means the saving of a lot of valuable time when one gets back again out here. It is helpful, too, to get *au fait* with the best methods of staining. And this reminds me of a note by Dr. Logan that I see in the January number of this year, p. 20. He says that in staining for the bacillus tuberculosis he uses "Gabbett's stain," and that this stain does away with the necessity of heating and decolourising, as for acid-fast organisms. I am unacquainted with this stain, and should certainly like to know more about it, and where I can get it, as it decidedly would be a great advantage and a saving of time not to have to heat the slide, as one does with *carbol-fuchsin*, then decolourize with acid and then perhaps counter-stain with methylene blue. In regard to stains I always use now Burrough's and Wellcome's "soloids." These are most convenient. The little "soloid" has simply to be crushed and dissolved in a given quantity of the proper solvent. All directions are given with each package. Stains can thus be always quickly and freshly prepared.

The May number of the CHINA MEDICAL JOURNAL, as it is now called, came in yesterday, and I can see it contains plenty of food for reflection. I am very glad to see that our Association has formed an Investigation Committee, and it strikes me that the Chairman could not have been better chosen. The formation of this committee ought to be a stimulus to us all to *work*, and surely, with our splendid opportunities, and with a number of good microscopes hard at it all over the land, *something* ought to be done.

Yours very sincerely,

ERNEST C. PEAKE.

LONDON MISSION HOSPITAL,
HENGCHOW, HUNAN, *June 13, 1907.*

REV. SYDNEY R. HODGE, M. R. C. S. & L. R. C. P.,

ENGLISH WESLEYAN MISSION, HANKOW.

For all the saints, who from their labors rest,
Who Thee by faith before the world confessed,
Thy name, O Jesu, be forever blest,

Alleluia!

O blest communion, fellowship divine!
We feebly struggle, they in glory shine;
Yet all are one in Thee, for all are Thine.

Alleluia!

The
China Medical Journal.

VOL. XXI. SEPTEMBER, 1907. NO. 5.

Original Communications.

[All copy must be in the hands of the Editors one month before date of publication to insure appearance in the following number. The editors cannot undertake to return manuscripts which are sent to them. A complimentary edition of a dozen reprints of his article will be furnished each contributor. Any number of reprints may be had at reasonable rates if a *written* order for the same accompany the paper.]

SYPHILIS AS SEEN IN CHINA.

MR. PRESIDENT, LADIES AND GENTLEMEN.

I must at once confess that my paper will not answer to its title. When I promised to give paper on syphilis I did not realise that it was meant to embrace the manifestations of this disease as met with all over China, and when I did realise it I was far too busy to enter into the correspondence with members of the society living in other parts of China that would be necessary to give my paper any value whatever. I have, therefore, confined myself to Syphilis as *I* have met with it during the last twenty years, and must trust to the discussion to bring out those differences, if there be any, which are met with elsewhere, to make our consideration of the subject more complete. My chief object, therefore, being to provoke discussion I have endeavoured, not so much to give a detailed and systematic account of syphilis as I have seen it out here as to call attention to forms of the disease remarkable either for their absence, extreme frequency and severity, or abnormal course. On the subject of *Hereditary Syphilis* I have little to add to what I said in my paper published in our JOURNAL in October, 1904. I said then, that I had not, on the whole, seen more of hereditary syphilis out here than I did at home, and explained it by the conditions of life out here favouring the operation of the law of the survival of the fittest, and it is well known that such survivors, the selected, may show few, and often no, signs of their early taint. I pointed out that, in my experience, the commoner affections were the osteoplastic affections of young adults and the anterior curvature of the tibia in young children.

On the subject of the acquired disease there are many points worthy of note.

When one remembers that syphilis is so common that it would scarcely be an exaggeration to say that everybody has had it in either its acquired or inherited form, and when we remember that, probably, there is no definite and regular treatment of it, such as obtains at home, the wonder is not that we see so much, but that we do not see more of its dire effects and that the population is so strong and healthy. I say this making all allowance for the death of the least fit, and it certainly does raise one or two questions.

(1). Is syphilis so inimical to the life of a nation as we have been accustomed to think?

(2). What, and what amount of treatment do the Chinese doctors employ?

On this second point I am hoping to gain some light. Of course there is no question that the Chinese doctors use Hg. both externally and internally, as profuse salivation in some patient, after a small quantity of Hg., will soon teach us if we did not know it before. The further question arises as to whether the Chinese faculty know and use the *iodides* in any form for this purpose. The point raised is an important one, for upon its answer depends how far we study the manifestations of syphilis out here uninfluenced by *mercury*. I have, personally, been led to the conclusion that although the Chinese doctors know that Hg. is good for the disease and use it, yet they do so neither intelligently nor systematically, and that, for all practical purposes, we *do* study the disease out here untempered by treatment. For instance we see out here tertiary ulcerations running riot in an exuberance of destruction that is simply horrible, but, remembering that the tendency of these manifestations is, if left to themselves, to spreading and not to repair, one marvels at the still greater number of people one meets with who show evidence of large and spreading ulcerations which have ceased to be active and are healed. Is this due to native treatment or to a sort of modified protection through inheritance?

I have been struck by the fact that I cannot recall a single case of syphilitic glossitis. This is interesting, as I believe it throws light on the part that smoking plays in this affection. Mr. Hutchinson has given it as his opinion that smoking takes the larger share in the production of this complaint, and the Chinese native tobacco being very mild, and its fumes generally cooled by being first passed through water, the tongue is not irritated as it is in the European method of smoking. If this be so the more general use of foreign tobacco and pipe in the large towns should cause a large percentage of this complaint reaching us.

Phagedaenic ulceration is extremely common in my experience, due, I believe, to the low vitality of the tissues, as it is mostly in overworked and underfed individuals that it occurs. I have only twice found any difficulty in arresting it; once in a man who passed from my care, and once in a broken-down opium smoker; in the latter case we did finally arrest it, and he is now, some ten years after, still in good health. In some cases, especially on the genitals, in which extensive papillomatous growth has supervened on the ulceration, it is not always easy to be sure whether the case is not passing into cancer. Mr. Hutchinson says the greatest help to the diagnosis is the careful observation of the warty growths. "It will be seen that the warty growth and the ulcerations are not continuous in structure, that the warts grow from the glans penis, whilst the ulceration involves the prepuce and is due probably to inflammation caused by acid discharges." Nevertheless I have not always found the differentiation easy. A case now in our hospital showed extensive ulceration of the penis with masses of quite soft papillomatous growth. There was extensive ulceration of the right inguinal region with crateriform edges. The condition was of some standing and had been treated with native plasters. The parts cleaned up under continuous hot Izal baths and then I amputated penis, excised edges of the ulcerated inguinal region and scraped away all I could of the infiltrated base. This I found extensively infiltrated with a gelatinous growth, and there were two small nodules in skin of abdomen which I excised. I believe the case was originally one of phagedænic ulceration which, I fear, has become cancerous. Mr. Hutchinson believes that such sores are prone to cancer, but here, where we cannot keep our patients long under observation if the condition does not speedily yield to anti-syphillitic remedies, we best serve the interests of our patients by freely removing the part. It is well to remember this enlargement of glands means cancer.

If we may judge from the rarity of aneurism amongst the Chinese, either syphilitic endarteritis is not common or it plays a less important part in the etiology of that affection than the text-books would have us believe. I have long believed that the most potent factor is intermittent strain, but I think severe specific arteritis may not be as common out here as one might suppose. Of course this is one of the questions where the inability to examine our patients *post mortem* causes one to speak with great hesitancy. I have said severe syphilitic arteritis, meaning by that of such a degree as to produce symptoms; although I have seen hemiplegin due to this cause, it is not in my experience common, and with syphilis so widespread we would have expected it to be so.

An interesting group of cases, of which I have seen one for certain and believe I have come across a second (both under the care of my colleague, Dr. Booth) is that of gummatous infiltration of the large bowel. I do not refer to cases affecting the rectum, of which we have all seen a good number, but cases in which the sigmoid flexure or a little higher is involved. The first case was in a young boy with symptoms of obstruction of the bowel and a sausage-like tumour, freely moveable, without matting of surrounding tissues, which was at first taken to be sarcoma, but cleared up entirely under specific treatment. The second case was a man, about forty-two, rather young for cancer, with the same symptoms of tumour in the same region, freely moveable and surrounding tissues not involved. He had had diarrhœa and was passing gummous material, in addition to normal faeces. It is true that we found the Schistosomum Japonicum embryos in the stools, but I believe that had nothing to do with the tumour. Unfortunately he was a beggar on the streets in a practically dying condition when picked up, and he did not live long enough to give the treatment any chance.

In eye affections, next to iritis, my experience is that syphilitic choroiditis is the commoner, which generally comes to us too late, when extensive atrophy of the choroid has taken place and the patients are perfectly blind with widely dilated pupils.

The affections of the nervous system are, in my experience, rare. Locomotor ataxy is very rare. I have only seen one or two cases, and only one of G. P. I. Whilst not prepared to say that true locomotor ataxy is never due to syphilis, I have never, personally, thought it proved. We now know that G. P. I. is a microbic disease and certainly if ataxy were at all commonly due to syphilis we could not out here, but see a good number of cases.

Myelitis, transverse, is fairly common, and the question arises, Can we offer any evidence towards the elucidation of the question of the relation of syphilis to myelitis? The matter is not yet definitely settled, for the diagnosis has not yet, I believe, been confirmed by any definite anatomical appearances. Eliminating those with a definite history of injury or following on some acute infectious disease there remains a margin of cases, acute in onset following exposure to cold, which may be either toxic or syphilitic in their ultimate origin. The only help I know that can come to us is (1) That, when syphilitic, the onset will become what Hughlings Jackson would call deliberate than acute, *i. e.*, will come on somewhat more gradually, though still rapidly, than the toxic cases and that (2) they will respond more rapidly to specific remedies, though I must admit this is by no means always the case.

With two words I close this very imperfect sketch.

1. The impossibility of getting reliable histories is very much against us in diagnosis and frequently causes us to lose the one important clue to our case.

2. The knowledge of the widespread influences of syphilis may make us very slipshod in our diagnosis. "When in doubt give *iodide*" is a dictum to be used with the greatest caution, and I have seen many a man's clinical acumen dulled by a lavish and unintelligent and non-painstaking use of specific remedies.

SYDNEY R. HODGE.

THE SPIROCHAETA PALLIDA REVIEWED.

By A. S. TAYLOR, M.D., Yangchow.

The reviews in this department will usually be on some single subject in each issue of the Journal, as that seems to be the method most useful to the members of the Association.

The writer regrets that he has nothing of a very practical nature to offer to the readers of the Journal in this issue, and he gives as his excuse the fact that he had no current literature accessible for review. As the present number of the Journal is to be devoted largely to syphilis, that interesting organism, the Spirochæta pallida, and its relations to the disease, have been taken for the subject to be reviewed.

The writer fully realizes the limited time a medical missionary has at his disposal for research work of any kind, and he hesitated before choosing this subject, but he remembered that there can be nothing that gives promise of throwing any light on the great unsolved problems of our profession that is without interest to us; and he feels that anything tending to make clearer the etiology of this disease will be welcomed.

We must always keep first in mind the fact that we are missionaries of the Cross, and that our first and supreme duty is to preach Christ and Him crucified; but we must not forget that we have chosen the life of the physician, and it is our duty to keep our knowledge as broad and as deep as we can, and to ever strive to be informed of all the great work that is being done in our profession all over the world. This is a duty we owe to ourselves; to the country we have come to serve; to the profession we represent; and to the King under Whose banner we labor.

The first definite description of the Spirochæta pallida was published by Schaudinn and Hoffmann in May, 1905. About six months later there appeared in the *Journal A. M. A.* for January 13th, 1906, an editorial article reviewing the work done since Hoffmann and Schaudinn announced their findings. This editorial is given in large part below.

The two investigators at first did not claim that their organism was the cause of syphilis, but they did state that the parasite is found constantly in all lesions of the secondary stage. Since their report more than 100 observers have found the spirochete. As Koch had to face the assertion that the tubercle bacillus was merely a fat crystal, so Schaudinn and Hoffmann had to meet the contention that their spirochete did not differ from the common ones already known to bacteriologists. Their convincing description of their work, however, soon silenced such opposition, and up to the present time confirmations of their findings, accompanied in many instances by micro-photographs, have been pouring in.

The form of the Spirochæta pallida is that of a very thin, corkscrew-like thread, with regular, numerous spirals, deep and close together. The pallida is the smallest of the spirochetes. Its length varies from four to twenty micro-millimeters. Those showing the latter length are probably several joined together longitudinally. The thickness varies from immeasurable slenderness to one-fourth of a micro-millimeter. At each end of the organism there is a slender, straight, hair-like flagellum, and some of the micro-parasites have two of these at one of the poles. The spirochetes are motile. No cultures have been obtained.

The Spirochæta pallida is very difficult to stain, and after staining appears much more faintly colored than the common varieties of spirochetes. The stain employed by Schaudinn and Hoffmann is Giemsa's eosin—*azure* solution. (The writer has had very satisfactory results from the modified Goldhorn stain mentioned below).

The organism was found in the deeper layers of the primary lesions, in fluid extracted from syphilitic inguinal glands, in secondary papules, and in the blood of the spleen of a child who died of congenital syphilis. Nearly pure cultures have been found in the fluid from syphilitic pemphegus blisters. Metschinkoff inoculated an ape with syphilis and found the Spirochæta pallida in the primary lesion produced.

Further research, perhaps extending over years, will be needed to establish it as the micro-parasite that causes syphilis or to disprove its claim to such distinction.

The following brief extracts from the literature will give some idea of the amount of work done on this subject. Again the writer expresses his obligations to the *Journal A. M. A.*

Bulletin de l'Academe de Médecine, Paris.

Metschinkoff and Roux found parasite in four cases in man, and in four cases experimentally produced in moukeys. They are of the opinion that syphilis is produced by this organism. In a later communication *(Annales de l'Institut Pasteur)* Metschinkoff stated that he found Spirochæta pallida in twenty-three out of thirty-one monkeys in which the disease had been produced.

He found that a prophylactic inunction of ten parts *calomel* in twenty parts *lanolin* after the inoculation, would prevent the occurrence of the disease. A medical student submitted to inoculation. One hour afterwards the part inoculated was thoroughly rubbed with the *calomel-lanolin* ointment, and he suffered no ill effects, while a monkey used as a control and which had not received the inunction developed typical primary and secondary lesions.

Münchener Med. Wochenschrift, Munich. (LII., No. 39, September 26th, 1906).

Loberheim remarks that the finding of spirochetes coincides with the clinical experience in regard to the transmission of syphilis. He found them in fifty out of fifty-eight certain cases of syphilis. All the positive cases being those with primary or secondary lesions, while the eight negative cases were those with tertiary lesions. In thirty-four control cases of various affections the findings were invariably negative.

Berlinger Klinicher Wochenschrift. (XLII., No. 36, September 4th).

Mulzer reports positive findings in fifty-five cases of syphilis and invariably negative findings in other affections.

Journal of A. M. A., November 11th, 1905.

Taylor and Ballenger of Atlanta, Ga., found Spirochæta pallida in eight cases of undoubted syphilis. The stain they found most effective was Giemsa's eosin and azure i, and azure ii.

The Lancet, London, September 30th, 1905.

G. M. O. Richards and L. Hunt. These observers found Spirochæta pallida in rose spots of skin of abdomen, chest, and arms. They consider the presence of this organism in a venereal sore as diagnostic of syphilis.

Journal A. M. A., October 14th, 1905.

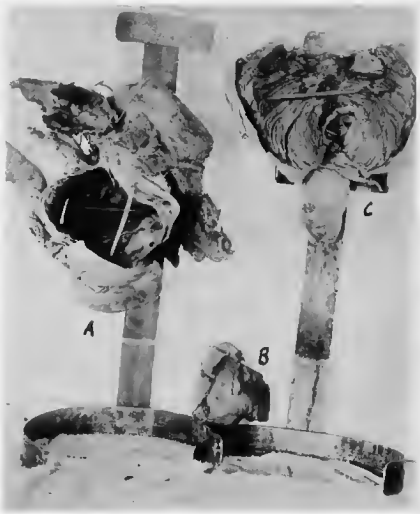
F. F. Russell claims to have been first in America to report finding spirochæta. He used Wright's modified Romanowsky's blood stain,

leaving stain on the slide for twenty-four hours. The organism is found in the deep scrapings from secondary lesions.

The writer has found undoubted specimens of the organism described as the Spirochæta pallida. The technic is briefly stated as follows. A primary or secondary lesion is scraped until firm tissue is reached. After the free bleeding stops several drops of bloody serum exude. These are spread thinly on a perfectly clean slide and allowed to dry. Without previous fixation a few drops of Goldhorn's modified stain are added. (For methods of preparation of this stain see *The Post-Graduate*, New York, February, 1906; or *New York Medical Journal*, March 24th, 1906; or *Journal A. M. A.*, March 24th, 1906, page 913). After two or three seconds the stain is poured off and the slide slowly introduced into clean water, the film side down. When washed (about three or four seconds) the slide is drained and dried in the air. The Spirochæta pallida are stained a purplish color, which may be changed into a light black or black-brown by treating the specimen with Gram's or Lugol's *iodine* solution. In one case of primary lesion, where the clinical history of syphilis was undoubted, the diaguosis was made certain to the mind of the writer by the presence of the organism in the deep layers of the chancre. No treatment was instituted, as it was desirable that the diagnosis should be confirmed by the appearance of secondary lesions. The patient was under observation for four months, and no secondaries appeared. This seemed to discredit the clinical and microscopic diagnosis until it was found that, against the strictest orders, the patient had taken a bottle of patent "Blood Purifier," which probably contained a large amount of *mercury* and *potash*. These drugs possibly prevented the appearance of the secondary symptoms. In a case of undoubted secondary syphilis, scrapings from the deep tissues of the mucous patches gave many spirochetes.

Reports from the literature could be multiplied almost indefinitely, but enough have been given to show that we have, after so many years, an organism very likely to prove to be the true cause of this disease. If any of the members of the Association wishes to make the stain and has not the direction for making it at hand, the editor of the department of "Skin Diseases" will be glad to send the formula taken from the file of magazines in his possession. While it takes more than the usual skill in microscopic technic to find this small and elusive "germ," any one going to the necessary trouble to see it, will not only be repaid for his pains by the satisfaction he feels over a rather difficult piece of technic well done, but he will also be in a position to make some contribution to the knowledge on the subject.

Case A. Aneurism of Common Carotid Artery at bifurcation, after operation.



Case I. St. Luke's Hospital Museum Specimens.

A. Saculated and Fusiform Aortic Aneurism. Heart above. Sack below. Dilated Aorta between.
B. Clot from Aorta in case above.
C. Saculated Aortic Aneurism showing complete and well organized Clot.

Case C. Aneurism of Common Carotid Artery.

A—A. Artery.
B. Origin of Sack.
C. Perforation.

NOTES ON ANEURISMS IN SHANGHAI, WITH SPECIAL REFERENCE TO THE QUESTION OF THEIR SYPHILITIC ORIGIN.

By W. H. JEFFERYS, A.M., M.D., Shanghai.

Quoting from Stengel (*Pathology*, p. 404) "Aneurisms are always due to some weakness of the walls of the blood-vessel and to the distending force of the blood within. It is therefore most common to find the disease in persons beyond the age of forty or forty-five years, and particularly in those who have acquired arteriosclerosis. Among the remote causes therefore are the causes of arterial disease—syphilis, gout, alcoholism, lead-poisoning, and other chronic intoxications: . . . . as contributing causes may be ranked all conditions which increase the blood pressure. Thus laborious occupations, hypertrophy of the heart, and diseases which occasion constant excess of blood pressure give rise to arterial degeneration and also to dilatation of the vessels in a purely mechanical way. Of all the causes, syphilis is most important."

In China we have, according to this excellent and undoubtedly true statement of the etiology of aneurism as found in America, the ideal conditions for the presence of aneurisms in abundance. (*a*) Syphilis, especially in the ports, is exceedingly prevalent among all classes, both high and low alike. One would naturally expect this in such a city as Shanghai, where the prostitutes are to be numbered by the tens of thousands and where the disease, probably endemic, is constantly re-emplanted by the sailors and others of all Europe and America; the disease itself being scarcely touched by the clinics of the hospitals for Chinese. The impression one gets is that almost one-half of one's patients are syphilitic. (*b*) And laborious occupations play an enormous part in the economy of all China. Here men do the work which in other countries is done by beasts of burden and by machinery. Men carry the heavy freight. Men till the ground largely by hand. Men pull the carts and the carriages, men do the running, the lifting and the hauling. Men row the thousands of junks against the current etc., etc. Truly the chief, far and near causes of aneurism are all but omnipresent in China, and yet I am inclined to agree with Dr. S. R. Hodge, of Hankow, in believing that aneurism is comparatively rare in this country. Let me quote here just what Dr. Hodge does say about the matter, and he is probably our best informed man on this subject.

Quoting from Sydney R. Hodge's "Conference paper, "Syphilis as seen in China," according to his observations in Hankow, "if we may

judge from the rarity of aneurism amongst the Chinese, either syphilitic endarteritis is not common or it plays a less important part in the etiology of that affection than the text-books would have us believe." "I have long believed that the most potent factor is intermittent strain, but I think severe specific arteritis may not be as common out here as one might suppose. Of course this is one of the questions where the inability to examine one's patients *post mortem* causes one to speak with great hesitancy. I have said severe syphilitic arteritis, meaning by that of such a degree as to produce symptoms; although I have seen hemiplegia due to this cause it is not in my experience so common, and with syphilis so widespread one would have expected it to be."

In Shanghai too syphilis is prevalent, extremely common in every stage and in the most exaggerated untreated forms, though its commonest tertiary manifestation is unquestionably gumma. Here too endarteritis is inconspicuous, and atheroma is certainly rarely seen, even in mild degrees. I have treated two cases of hemiplegia in the past five years, but in neither of these was atheroma evident, and the subjects were both old men of the laboring class and without other indication of arterial degeneration than the cerebral hemorrhage.

A short series of rather interesting aneurisms, extending over some five or six years in time, has prompted me to put them on record in connection with this question raised by Dr. Hodge. They are too few to afford more than contributory evidence towards the ultimate solution, but they have the advantage, denied to Dr. Hodge, that I have seen some of them, as it were, *post mortem*, that is, I have seen the insides of nearly all and have several of the specimens in our museum. First I will briefly outline each case.

Case A. Sampan-man, age fifty, has seen hard service, no specific history obtained. Aneurism the size of a small fist at the bifurcation of the right common carotid. Pulsates markedly and is very tense. Has developed slowly. Patient having had an arm previously amputated, in St. Luke's Hospital, for traumatism, ready "to have his head cut off if thought best." These were his own words. The voice is husky.

Operation. Ligated the common carotid "below." One small stitch abscess. He staid in bed one week, then insisted on leaving. Saw the patient three months later while treating a member of his family. The tumor was about half the origiual size, softer and pulsated very gently. No pain or discomfort and appeared doing well.

Case B. Ma-foo (coachman), about sixty years old. Feeble and plethoric. No specific history obtained. Has small tumor, pulsating,

projecting an inch above the right clavicle. Diagnosis, innominate aneurism. Carotid and subclavian probably slightly involved. Urged operation, but was refused unless a guarantee of cure were given. Heard of the death of the patient within three months. At the time the patient was seen there was some slight respiratory distress.

Case C. Clerk. Age about thirty. Marked dispnœa, great anæmia, and exhaustion. No specific history obtained. A pulsating tumor the size of three fists above and extending beneath the left clavicle. Diagnosis aneurism of the left common carotid. There was a hole in the aneurism the size of a twenty-cent piece, and this was plugged by an organized clot which slipped in and out with each cardiac pulsation, while a few drops of blood oozed around its edges from time to time. Patient said that the tumor had grown until the skin over it was very thin, and that the day before a native doctor had run a needle into it at the most prominent point. There took place at once a furious hemorrhage, from which he nearly died and would have done so had the clot not plugged the hole of its own accord.

Permission to operate was not obtained until the next morning, meanwhile the patient was kept quiet and aconite administered.

Operation. I had under consideration the expediency of cutting down through the aneurism and trying to plug the carotid with the finger and then remove the whole growth at my leisure, but the shape of the tumor was fusiform, and it extended so far beneath the clavicle that I was afraid the lower entrance of the carotid would be too large to render this procedure successful. What I did therefore was to attempt to reach the carotid from the outer side and under the bone. To do this it was necessary to disarticulate the clavicle from the sternum. There were two accidents during the operation. In tracing down the vessel, it was necessary to raise the tumor gently, and in doing so the clot became dislodged. There was some blood lost here, but by promptly grasping the opening in the aneurism with a powerful clamp, we were really better off than before and the patient's condition was not yet that of collapse. I then worked very rapidly and succeeded in getting an aneurism needle nicely around the carotid just at its origin when there was a sucking sound and a few bubbles of air entered the external jugular vein which in my hurry I had cut and not stopped to clamp, there being no bleeding from it, and the patient died of air embolism.

The aneurism proved to be saculated, and the photograph shows from what a small opening in the side of the carotid the large tumor arose. The sack is lined with a smooth intima for some inches about

the point of origin and the vessel is apparently in good condition. No evidence of disease.

This patient was possibly syphilitic, though there were no active lesions and the history was indefinitely negative. No history of strain.

Case D. Li Tsing-wo, farmer. Age fifty-five years. Large fusiform aneurism of the popliteal artery. Patient in a critical condition, and aneurism threatening to burst. Refused amputation, but consented to anything else.

Operation. Incised, turned out the clots, tied the popliteal immediately above and two vessels of exit, took away the whole sack and packed against the bone. Little hope was entertained from the collateral circulation; the heat of the leg was not maintained and gangrene set in. Patient still refusing amputation; left the wards.

There was no history of syphilis, but the farmer in China leads a very hard life, and this one showed plenty of wear and tear.

Case E. Carpenter. Age about fifty. Three weeks before patient sprained the knee joint while walking. (This might have been the rupture of a small aneurism or more likely the injury to the vessel, popliteal.) Two or three days later he noticed a decided swelling in the popliteal space with some pain. Suspecting that "it was caused by the poisoned dart of the evil one," he applied to a sorcerer for treatment. The sorcerer gave him a round dozen punctures in the bend of the knee with a long "needle." There was considerable hemorrhage from this treatment, but, "in spite of this," the swelling remained as large as ever. (Naturally so.) He then consulted a native physician, who made external applications and gave internal treatment, with no benefit. The swelling extended up the inner side of the thigh. Yesterday the native physician himself resorted to needle punctures. As a result of these, patient was brought to the clinic.

At present the patient is shocked. Locally there is a large boggy tumor in the popliteal space and up the line of the femoral artery to the middle of the thigh. The whole leg is boggy and cold. There is little or no pulsation over the tumor.

Operation. Amputation was performed. The history is partly missing, but I believe this patient died within a couple of days.

Pathology. The aneurism is low down near the bifurcation. Little is left of the original sack, which may have been fusiform. The bone is bared and ulcerated. The vessels above and below are normal in size, smooth and healthy looking.

CASE F. POPLITEAL ANEURISM.

Probes mark entrance and exit of vessel.
Circle marks the original walls before ulceration.

CASE E. POPLITEAL ANEURISM.

a. Artery above.
b. Entrance to Sack.
c. and d. Double exit.

CASE G. HIGH FEMORAL ANEURISM before ligation

Case F. Zung Ah-hai. Age twenty-six. Club boy by profession. Long hours and constantly on his feet. Delicate looking. Smokes opium. Gives a doubtful specific history. Parents were healthy, but patient gives history of gonorrhœa and eruption six years previously. Three weeks previously felt a lump in his popliteal space. Right leg. Grew tighter and tighter every day until the circulation in the lower leg was almost shut off. Leg is now cold and edematous. Marked swelling and pain back of the knee joint.

Present trouble has been treated by a native doctor; externally by applications and internally by medicine.

Aneurism diagnosed.

Operation. Leg amputated in the lower third of the thigh.

Pathology. Large and extensive dissecting of the tissues and ulceration of the femur. The aneurism is high in the space, and some two inches of the sack remain posteriorly. The vessels above and below are healthy and show no signs of diminution of caliber or of endarteritis.

Case G. Occupation unrecorded. I believe he was a tailor, but do not remember surely. Was distinctly syphilitic. About twenty-two years old. For some weeks had noticed a pulsating tumor in the upper part of scarpa's triangle of the left leg.

Diagnosis, probably aneurism, possibly a gumma or sarcoma over the femoral vessels.

Operation. As the tumor extended under Ponpart's ligament, the external iliac artery was ligated in the place of election, or a bit above it. Pulsation stopped at once and the tumor subsided. The circulation in the foot was promptly re-established and no pain or other ill effects were manifested. There was a slight desquamation of skin during the second week. Patient left after three weeks in bed, well satisfied. Specific treatment was administered while he was in the wards.

Case H. Wong Ming-foo, fortune teller. Age fifty-three. Thirty years ago had a sore on the penis, lasting for two weeks. No other history of syphilis.

Has now a large pulsating tumor on the right side of the chest in the region of the mammary gland. It extends to the clavicle almost and up under the pectoralis major into the anterior axilla. Here the pulsation is especially marked, but the whole huge mass expands with the pulse and is under terrible tension. One almost hesitates to touch it, lest it burst. Patient complains of pain, but has no dyspnœa, and speaks clearly. He says that in the sixth month of last year (about a year ago) he felt pain about two inches above and to the inner side of the

right nipple. Pain was "severer in damp weather and excruciating in the twelfth moon." Then a mass the size of a dollar appeared at this spot. It "did not come from withiu the chest" (he said this.) He "could pick it up in his fingers." It was not very hard and was slightly movable. The tumor increased in size and hardness very rapidly. At present the aneurism measures six inches in diameter aud four iuches high from the chest wall. It extends from the first rib to the seventh and from the steruum to the midaxillary line. When he lies down he coughs violently. He is an opium smoker.

Operation. A perforated ueedle was inserted low down in the tumor, away from the most marked pulsation; about a pint of blood flowed, while fifteen feet of sterile silver wire was inserted. The puncture hole was closed with a needle, on which a figure of eight was wouud. No anæsthetic was used.

Patient felt much relieved for two days probably through lessened tension in the blood current. Two days later pain was worse and became excruciating.

Second operation. In spite of the history the marked pulsation in the region of the axilla induced me to resort to an exploration of the subclavian in order to see if by any remote chance the axillary artery might have relation to the tumor. The reasons for this were gone over with two colleagues and seemed sufficient to warrant the exploration, considering the desperate nature of the case and the expectation of immediate death. A little *chloroform* was administered in the semi-sittiug posture and the third portion of the subclavian sought for. Strange to say it could uot be readily found. Probably it was shoved backwards out of the field. The first portion was then easily exposed, but was quite soft and compressible. The innomiuate was also investigated. It lay higher than normal, and this was taken as a final proof of the aortic origin of the aueurism.

The patient died without rupture of the aueurism, of exhaustiou, some hours later.

Pathology. The aneurism was opened aud explored. There was a huge sack, mostly outside of the chest wall. The fourth rib was eaten away for two inches, the third had a bite taken out of it, and the fifth was pushed downwards. The opening was two iuches round. The inuer sack communicated with the aorta by a smooth, neat hole, the size of a large thumb nail. The aorta was smooth and soft and normal in size. The opening was auterior and up, where the ascending aorta becomes transverse.

The sacks were lined with a thin tough clot a quarter inch thick and the silver wire was nicely coiled, partly in and partly out of the chest wall. There was a small fresh clot in its meshes, but only a promise of future usefulness (?). The axillary pulsation was due to exteusive recent dissectious in that quarter.

SUMMARY.

Case.	Seat of Aneurism.	Age.	Specific History.	Condition of Vessels.	Atheroma.	Occupation.	Remarks.
A.	Common Carotid.	50.	Negative.	Fairly good	Absent (?)	Hard-labor and Exposure. Sampan-man.	
B.	Innominate.	60.	Negative.	Fairly good.	,,	(?) Hard-labor and Exposure. Ma-fu.	
C.	Common Carotid.	30.	Negative(?)	Good.	,,	Clerk.	Opium Smoker.
D.	Popliteal.	55.	Negative.	No record.	,,	Hard-labor. Farmer.	
E.	Popliteal.	55.	Negative.	Good.	,,	Hard-labor. Carpenter.	Slight Traumatism.
F.	Popliteal.	26.	Positive.	Good.	,,	Moderate labor, constantly on his feet. Club-boy.	
G.	Femoral.	22.	Secondary Syph. (?)		,,	Tailor. Long hours.	
H.	Aorta.	53.	Positive (?)	Good.	,,	Fairly easy. Fortune-teller.	Opium Smoker.

* * * *

There are a number of ways in which syphilis may involve the blood vessels. Firstly, arterio-sclerosis, either diffuse or circumscribed; secoudly, hyperplasia of the intima and obliteration of the lumen by "syphilitic infiltration and induration or adjoiuing gummata." (Stengel) The adventitia may likewise be affected. But "there is no histologic or macroscopic feature by which the syphilitic nature of the disease can be positively asserted." (Stengel).

Of the eight cases here reported not one showed atheroma, not even the aortic aneurism. Furthermore, so far as the specimens show, and in the amputatious a large arterial surface could be examined, none of these cases show other than healthy vessels of normal lumen.

The evidence, in so far as these few cases have any value (and they are merely laid on the general pile), the evidence then is against syphilis as playing an important part in the etiology of most of these aneurisms. Case G. may easily have been of syphilitic origin, either a gumma overlying a femoral aneurism or an ulceration involving its coats. There is no way of deciding, since the patient recovered. The same may be said of case F., though the specimen shows nothing. Case B. had a healthy looking aorta, except for the aneurism and the surrounding vessels seemed in good condition.

Four cases may be directly attributed to hard labor. All these patients were old men. Ages fifty, sixty, fifty-five and fifty-five.

Two cases had doubtful syphilis with easier labor. Ages thirty and fifty-three.

Two cases had positive syphilis with moderate labor. Both young men. Ages twenty-six and twenty-two.

Before closing these remarks I would like to add an impression, namely, that it is a fallacy to suppose that the induction of a clot is anything but a totally incompetent and ineffectual cure for aneurism. Even in those few cases where a degree of success in inducing a clot seems to have been attained there is no real cure or even temporary safety attained so long as the pressure of the circulation maintains. Take one illustration, and the literature of aneurisms offers much corroboration. Here in Case H. we have almost a record aortic aneurism, as far as size and pressure goes, and practically no clotting, and yet the patient died without rupture of exhaustion, for which his opium smoking was largely responsible. (It took grain doses of *morphine* to affect him at all). And yet again (Plate one) are two specimens of aortic aneurism in non-Chinese (with some atheroma), in which the most compact clots thoroughly filled each cavity without any apparent delay in respect to a fatal issue. I have a very poor opinion of the clot prospect in the cure of aneurism, and would, pending the working out of the promising "lumen restoration" idea, in which some good work is now being done, depend on ligation or rest and a quiet life combined with general measures for health and particular measures to meet specific and diathetic indications, and especially, rheumatism and syphilis.

MISSION HOSPITAL AND DISPENSARY CONSTRUCTION IN CHINA.

By E. L. Woodward, M.A., M.D.

Modern hospital construction in the West has an extensive literature of its own, and is not the subject of this paper. Its accepted principles have been adapted and modified in many and ingenious ways in the mission hospitals throughout China to suit varying conditions of climate, accessibility to the outside world, local building materials and methods, size and disposition of the available building site, habits of life of the native community, amount of the fund for building, and individual tastes or eccentricities of the doctors in charge. A systematic collection of these data, on a much larger scale than has ever been done in the pages of the Medical Journal, should be possible, and a careful digest of it would certainly be most instructive and interesting to those contemplating building or extending their hospital plants, and among the mission doctors of China who is not! The amount of time, correspondence and even of travel involved, would, however, be very considerable, to

FRONT. PROFILE.

CASE II.—LARGE ANEURISM FROM ASCENDING AORTA

do it effectively, and it would prove quite impracticable to condense the resulting mass of information into the limits of a conference paper. I have therefore assumed the less ambitious task of giving my own experience in dealing with the problem of building a mission hospital at Anking.

The conditions at Anking are fairly typical. It is a conservative provincial capital of Central China, where every phase of mission progress, including land purchase and building, has to be accomplished in the face of great difficulties. Land is dear and hard to get. Except the brick and mortar, local building materials are inferior and very dear, and the importation of the same from Shanghai must be done by native junk and is attended with as serious inconvenience and annoyance as obtains in the average interior city with water communications. Constant supervision prevails but little with the local workmen to improve upon the "*c'ha puh to*" (which is elegant Chinese for "jack-leg") building methods of their immemorial forefathers. Their utmost possibilities were realized in the thirty-bed pioneer hospital, erected in Anking in 1901, built entirely by local workmen and with local materials. For six years it served admirably its modest purpose as a small, economical hospital and dispeusary combined, so arranged as to be most effectively administered and supervised by one doctor. A description of it with plans and photographs appeared in the MEDICAL JOURNAL of July, 1904.

In the autumn of 1905, however, the heavy responsibility was placed upon me of building at Anking a complete mission hospital plant, to cost about $75,000 Mexican. It was to include the purchase of a site, the building of residences for two mission doctors and two mission nurses, residences for two Chinese hospital internes, and the building and equipping of a dispensary and hospital with separate departments for men and women; the latter to accommodate about 100 beds and to admit of future extension. Some of the more important problems dealt with and solutions attained are as follows:—

THE SITE FOR THE HOSPITAL.

The alternative was offered between a half acre site in the centre of the city, on a busy street, and adjoining our compound for evangelistic work; or a five-acre site in a quiet market garden suburb, yet still within the city walls. Decision was made in favor of the latter, owing to the following considerations:—

1. The large open site was more healthful for both hospital and residences.

2. While the five acres for the hospital plant would probably prove ample, ten adjoining acres could gradually be acquired by the mission for other foreign residences and for its educational institutions, leaving the compound in the centre of the city for evangelistic and parish work exclusively. Five acres have already since been added to the new hospital compound for schools and residences.

3. The larger site would afford ample opportunity to plan and build on ideal lines.

4. When the reputation of a hospital has been well established, its patronage is but slightly affected by its removal to a less central position, provided, as in this case, there are no rival hospitals to compete with it. Investigation has shown that a surprisingly small percentage of the hospital patients come from the neighborhood of the hospital itself, while about one-third of the dispensary patients and one-half of the ward patients come from outside the city altogether.

THE SITE FOR THE DISPENSARY.

The present hospital, as I have said, is very centrally located, and the dispensary occupies the ground floor. The problem was now presented whether to continue the dispensary in its present central location, or to move it with the hospital to the new site half a mile distant. The latter course was adopted in view of these considerations :—

1. The dispensary finds its chief value not in its own extensive but too often superficial services, but rather in the number of selected patients which it may prevail upon to enter the hospital wards for thorough treament under favorable conditions. It is often very difficult, at best, to persuade patients to enter the hospital, and this difficulty is immensely increased if the hospital is at a distance from the dispensary, and the patient's timid resolution has to stand the strain of a journey across the city, and perhaps of a consultation with misiuformed and prejudiced friends at home. Of the patients seeu on an itinerating trip, and urged to go to the hospital with the promise of certain cure, how small a percentage ever arrive there! No. Have the dispensary at the hospital if possible.

2. Few patients will be deterred from attendance at a dispensary of established reputatiou by an additional half mile of distance.

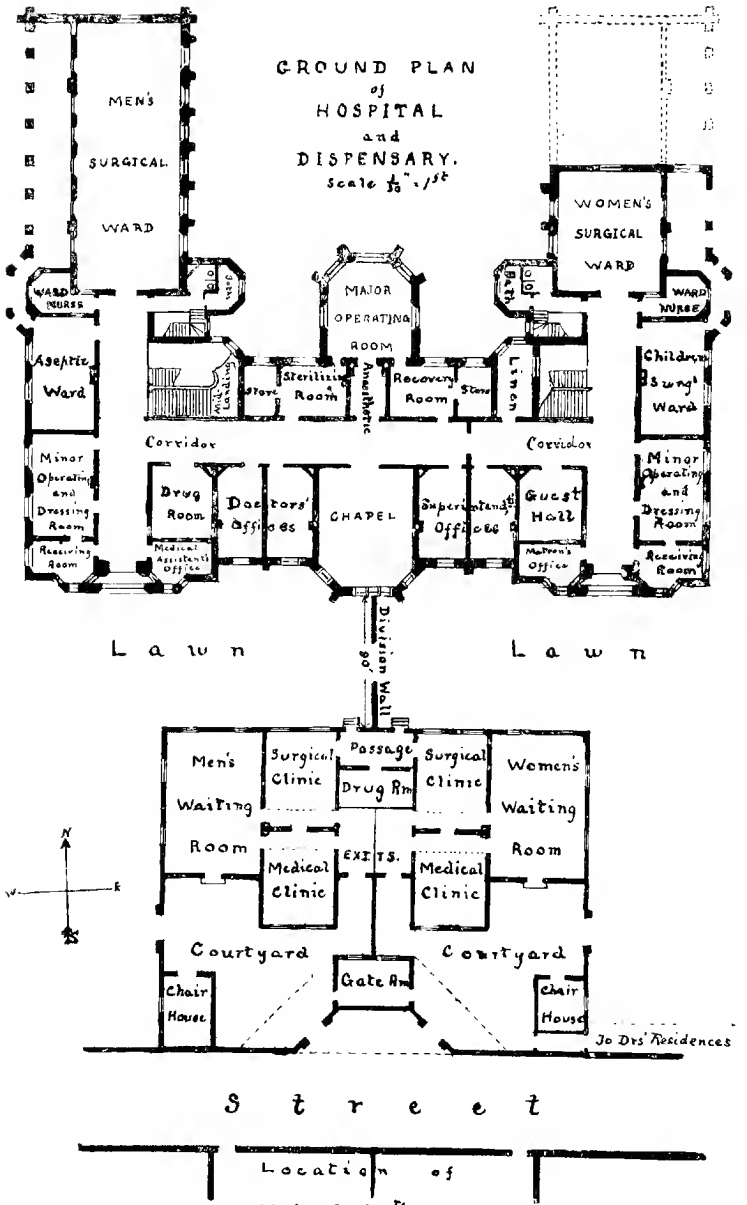
3. The inconvenience, loss of time, and extra expense of conducting a distant dispensary is very considerable.

DISPENSARY IN MAIN BUILDING OR DETACHED.

In smaller hospitals in charge of one doctor economy of plant and of administration usually renders it desirable to have the dispensary a

ST. JAMES' HOSPITAL, ANKING, ANHUI.

American P. E. Church Mission.



part of the main building, as has heretofore been the case at Anking. In hospitals of larger size, equipment and staff, it is highly desirable to have the dispensary in an entirely separate building, so as to protect the hospital proper from the filth, contagion, noise and disorder more or less inseparable from every busy clinic. It is preferable to have the hospital visible from the dispensary, to remove by its pleasing aspect imaginary fears of patients as to its nature. The clinic patients should, however, be kept in absolute segregation from the hospital precincts proper.

PLAN FOR THE DISPENSARY.

As the conditions are usually not very complex, a good plan for a dispensary should not be difficult to devise. Most of the features which experience has shown to be desirable have been secured in the dispensary plan adopted for my new hospital (see Dispensary Plan).

1. The central location just within the main entrance of the hospital compound is architecturally effective and ideal from the standpoint of convenient and economical administration.

2. The parts of the dispensary for men and for women, though with separate gateways, courtyards, waiting rooms, clinic rooms, dispensing counters and exits, are at the same time under one roof, and through a short connecting passage have direct communication with each other and with the dispensing room between.

3. This dispensary room is centrally located and has dispensing counters for the men's and women's sides divided by a partition. It thus saves duplication of drug dispenser, stock and equipment.

4. The waiting rooms are furnished with platform and desk and serve as dispensary preaching halls as well. The main hospital building and grounds are visible from their windows, and we trust will present an attractive appearance to the waiting patients. The exits into the medical and surgical clinics respectively are located close together, and the stream of patients into both may be regulated by one orderly. Patients having once passed from the waiting room into the clinic, pass out another way by the dispensing counter and do not return to the waiting room. Preaching is thus rendered possible during the progress of the clinic, as well as beforehand, and waiting patients are not perturbed by the rueful aspect of some of their predecessors.

5. The medical and surgical clinic rooms are large, and especially well lighted by large, high windows. They have direct communication with each other and with the waiting rooms of their respective sides. They also have close connection, through the rear passage, with the dispensing room and with the clinic rooms of the opposite side. This

arrangement admits of conducting from one to four clinics at the same time, and of one physician, when necessary, supervising several clinics conducted by trained nurses, or by Chinese assistants. Doors in the rear passage-way afford private communications with the main hospital compounds and buildings in the rear.

6. Owing to the damage wrought to wooden floors by the nail boots of patients in wet weather, cement floors are much preferable for the parts of the dispensary through which the streams of patients must pass. Wooden floors, however, as less chilling in cold weather to the feet, are preferable for the rest of the building. A rather novel feature is the use of cement floors, not only in the waiting rooms and exit passages before the dispensing counters, but also in the connecting strip of the clinic rooms extending between the doors of entrance and exit. The rest of the clinic rooms are floored with wood, and invasion of it is controlled when desirable by closing the bar in a rail separating the two parts. The stream of patients and their friends may thus at will be kept confined behind the rail and upon cement floors.

7. The small closet usually thought adequate for dark room purposes has, in my experience, proved disagreeably close and hot for such use in warm weather. The same purposes are to be served in this dispensary by the transformation of the medical clinic rooms into dark rooms, as occasion requires. This may be accomplished instantaneously by the drawing of opaque curtains to the windows.

8. The gate room is between the two main gateways, and the one gatekeeper guards the avenues of entrance and exit to the four dispensary and hospital departments and to the private compound of the foreign residences. The porticoes without and within the main gateways are roofed in, and furnish adequate shelter for chairs and their bearers while waiting in bad weather.

THE PLAN FOR THE HOSPITAL.*

This, unlike the plan for the dispensary, is a very complex and difficult problem.

As a result of my own experience, I would recommend these guiding principles :—

1. Adhere as closely to approved Western standards as local conditions and available funds permit. Employ the best materials and contractor available.

* Note.—Photograph of St. James's Hospital, Anking, will appear in our next issue. They are unavoidably delayed.—*Editor.*

2. Keep in mind that a successful hospital will inevitably require enlargement.

3. Guard against perversion of good plans by pet hobbies.

STYLE OF ARCHITECTURE.

The purely Chinese architecture is unsuited for hospital buildings. The real question should lie between the modified Chinese and the purely Western type. Where conditions make it possible, I would strongly recommend the latter, for the following reasons.

1. When a Chinese official discards his flowing robes for foreign garb, he also abandons his queue and peacock feather at the same time. Has not the illustration some aptness as a criticism of the good taste from an architectural standpoint of foreign buildings in China retaining the distinctive Chinese roof? Certainly this seems to conform with the best Chinese taste in the matter, as the great majority of the new government buildings, following the example set by Japan, are adoptiug purely Western models.

2. The Chiuese features retained are sure to exhibit the flimsy character of the original type, and are difficult to keep in good repair.

3. The former prejudice among the masses against buildings of foreign architecture is rapidly passing away, as is shown by the frequency with which the better class Chinese residences are being built two story with various imitations of Western architecture.

In my own hospital I finally determined to adopt the institutional Gothic type, which embodies, as nothing else does in architecture, the noblest historical ideals of the Protestant Christianity which we endeavor to exemplify in China.

THE WOMAN'S HOSPITAL VS. THE SEMI-DETACHED WOMAN'S DEPARTMENT OF A GENERAL HOSPITAL.

There can be no question that a greater degree of separation between men and women is required in hospitals in China than in the West, both among hospital assistants and patients. This separation may be secured in an absolute form of entirely separate hospitals for men and women, or in a modified form of semi-detached departments for men and women in a general hospital. With the proper safeguards, which the experience of a number of mission hospitals proves to be quite practicable, the general hospital with semi-detached departments presents important advantages.

1. It effects a very material economy in ground, buildings, and equipment. Duplication is avoided of gatehouse, intervening walls of

both dispensary and hospital buildings, dispensary and hospital drug rooms and their expensive stock, the major operating suite with its still more expensive equipment, the microscopical and X ray laboratories, the hospital chapel, the system of water supply, the heating system of the rooms used in common, the kitchen, laundry and morgue. In my own hospital the duplication of these features would cost between $10,000 and $15,000 Mex.

2. It secures also an equally important economy in administration. The medical staff have every facility for mutual co-operation, and the necessity is avoided of closing the women's department during the sickness or absence of the foreigner in charge, as is so often experienced where the women's hospital is entirely separate. Where one or two trained nurses are in charge of the women's and children's departments under male doctors, as at Anking, it permits of their assuming the duties of superintending the whole hospital as well. It is hard to emphasize too strongly the value of the flexibility with which such a hospital adapts itself to the unforeseen and unavoidable contingencies affecting the strength of the foreign staff. In addition to the increased efficiency of the foreign staff, a most important economy is secured among the Chinese employees. Duplication is avoided of the following employees: gatekeeper, drug dispenser, major operating room nurse, cook, laundryman, and several orderlies. This, with saving in fuel and other incidentals, will amount to quite $700 Mex. per annum, perhaps twenty-five per cent. of the total annual expenses of the women's and children's department.

SHAPE OF THE HOSPITAL.

Having determined upon a general hospital with semi-detached departments, what shape should it assume ?

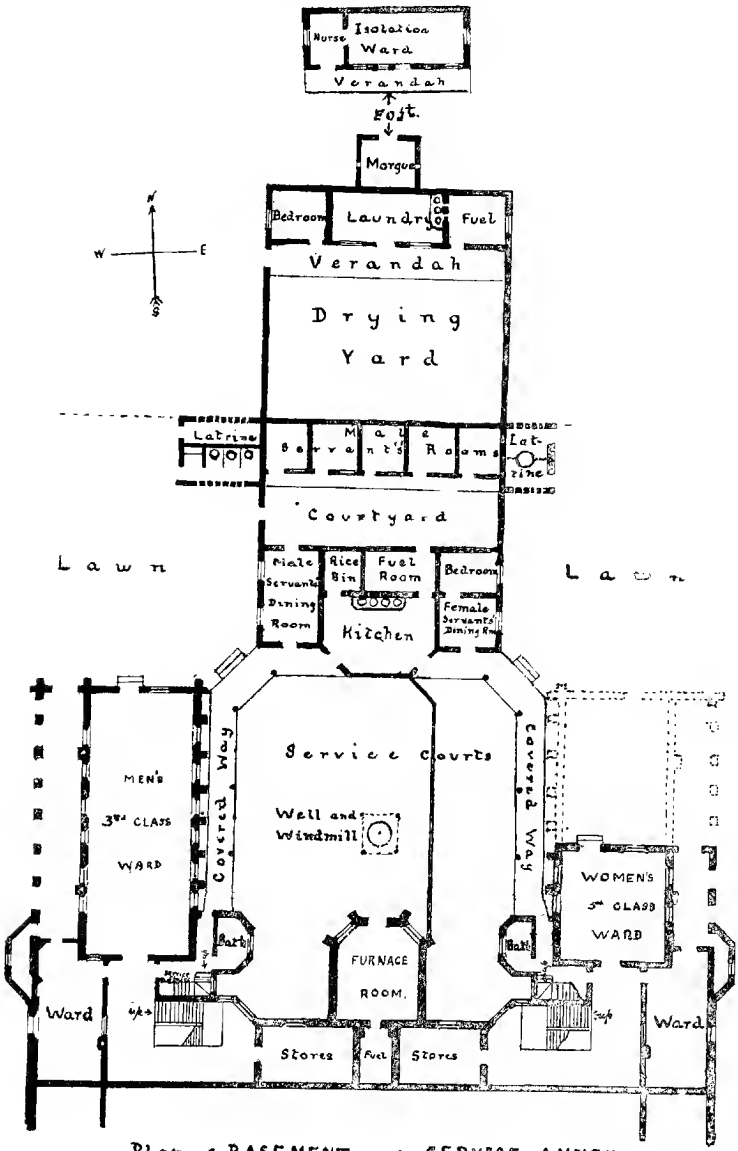
The system of one story pavilion buildings has some advantages on grounds of sanitation and adaptability to subsequent extension. It is, however, expensive in land, in foundations and roofing, and increases no little the difficulties and cost of administration.

Buildings of more than two stories are undesirable where ground space is adequate. The chief objections are those of sanitation, inconvenient service without a steam elevator, danger to life in case of fire, and in the far interior perhaps unnecessary offence to Chinese prejudices against such high buildings.

After much study I reached the conclusion that the ideal for a general hospital of 100 beds, capable of future enlargement, was to be found in the two story "E" shaped building with its arms turned to

ST. JAMES' HOSPITAL, ANKING, ANHUI.

American P. E. Church Mission.



Plan of BASEMENT and SERVICE ANNEX

Scale $\frac{1}{50}$" = 1ft

the North; the administrative department occupying the centre, the major operating room the short Northern arm, the men's department to the right with its wards occupying one long arm, and the women's and children's department to the left with corresponding wards in the other arm. This ideal had to be somewhat modified in actual construction owing to the considerable sloping away of the hospital site to the North. A basement story under the Northern arms became a necessity, but with this slight modification it has been possible to conform exactly to the ideal.

THE ISOLATION OF THE WOMEN'S AND CHILDREN'S DEPARTMENT.

A careful examination of the plans of the various hospital and dispensary buildings and of the grounds about them will show that the degree of isolation attained for these departments, without interfering with the general administration of the hospital as a whole, is very great indeed.

The methods by which this has been accomplished are as follows:—

1. Subdivision of the general hospital compound by walls in the mid-line from the gate house to the dispensary, from the dispensary to the hospital, from the hospital to the service annex.

2. From the two compound gateways united into one under the one gatekeeper, the approaches to the two departments diverge to separate main entrances near either end of the South front.

3. An entire duplication of the system of stairways for both patients and for service in the two departments has been provided.

4. Of the five doors of intercommunication between the two departments, the one in the upper central corridor will be kept locked, except on rare occasions; the one in the dispensary will be locked, except at dispensary hours; the one required for the kitchen service may be reduced to a barred window closed at night; the one through the gate house will be under the guard of the gatekeeper, and the ordinary means of intercommunication between the two departments will thus be reduced to the door in the lower connecting corridor, which will be unlocked only during the busy hours of the day.

As a further means of restricting the intercourse between the two departments, the chapel and major operating suite may be reserved for the use of the women's department at certain hours of the day. Under these conditions a wholesomely strict hospital discipline should be quite attainable.

INTERIOR ARRANGEMENT OF THE HOSPITAL.

The reasons determining the disposition of the various rooms may best be understood from a study of the plans. Suffice it to say that in

the absence of a steam elevator, it seemed best to have the entire surgical department, with the administrating offices, drug room, guest ball, and chapel on the grouud floor; to place the medical wards, private rooms aud laboratories on the upper floor and to utilize the extra basement wards for third class patients.

THE OPERATING ROOMS.

Each department bas its own minor operating and surgical dressing room. The major operating suite will be shared by both departments. It consists of an anæstbetic room in the centre, witb sterilizing and recovery rooms to each side; all three opening directly iuto the major operating room. This has Northern ligbt rendered doubly effective by a skylight. Tbe floor is being made of marble chips bought in Japan, mixed with cement, laid upon a cement base and polished smooth with stones of graduated fineness, also imported from Japan for the purpose. It is hoped ultimately to beat the major operating room, if not the whole hospital, by the system of hot water radiators. Until this proves practicable, tbe objectionable features of smoke and ashes from a coal stove, and of vitiated air from an oil stove, will be surmounted by the utilization of two hot air registers; the one conducting a current of hot air from about the stove for beating tbe hot water supply of tbe hospital in the "furnace room" below, and the otber from an extra stove beside it, to be fired wben the bot air current from tbis source is inadequate.

CORRIDORS.

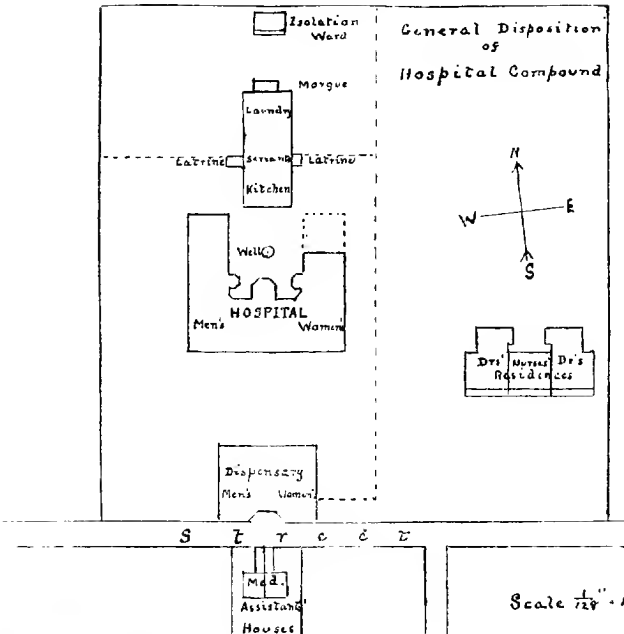
Every precaution should be taken to keep the corridors, which are an iudispensible feature of such a hospital, from being dark, poorly ventilated and unsauitary. These drawbacks bave been most satisfactorily eliminated in tbis hospital by the following precautions. Tbe dimensions of the corridors are liberal—teu by fourteen feet in cross section. All doors opening into them are glazed in the upper half and are provided witb transoms. Tbe staircase openings flanking the corridors are of very unusual size, as are the staircase windows, which are twelve feet high. As a result tbe ligbt is abuudant and the ventilation excelleut everywhere.

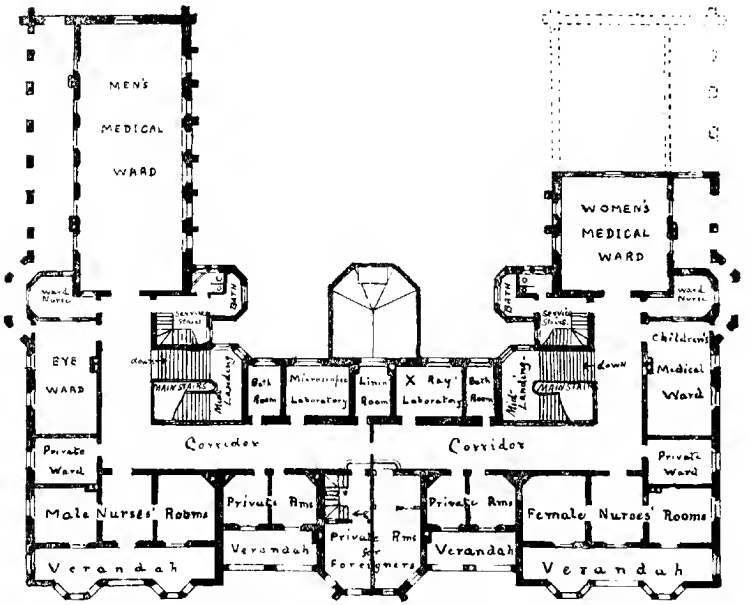
VENTILATION.

Nothing is more important in a hospital than thoroughly good ventilation. The measures taken to ensure this in St. James' Hospital are these:—

ST. JAMES' HOSPITAL, ANKING, ANHUI.

American P. E. Church Mission.





The main wards have the open air on three sides—North, East and West—and the main body of the building is, to a large extent, reserved for administration purposes alone.

All windows and doors throughout have transoms, hinged below and opening inwards at the top, so as to throw the air current to the ceiling.

Tobin's tubes, or flues, ten inches square and six feet long, are built in the external walls of all wards, opening externally at the floor line and within the ward above the patients' heads.

VERANDAHS AND SUNLIGHT.

Broad verandahs adjoin all wards and private rooms throughout the hospital. Elsewhere there are no verandahs, a judicious and most important economy.

A cardinal principle of hospital construction should be that no ward or private room should lack abundant sunlight. The morning sun, and plenty of it, is especially desirable for the children's wards. Ideal results in these respects have been attained throughout the whole hospital. This in my judgment is a fatal defect in the architects' plans for another large hospital now being erected in China, in which the two children's wards of all others are relegated to the bleak Northern aspect of a block rectangular building, where no ray of sunlight could ever enter.

LATRINES.

No problem with which hospitals in China have to deal is more difficult than that of sanitary latrines. The water closet system is of course impracticable from lack of adequate water supply and sewerage. The system which has seemed to me best adapted to the conditions and is being installed in St. James' Hospital is as follows:—

For the use of servants and patients in the basement wards (3rd class) there is a cement-floored outbuilding latrine, fitted with apertures adapted to the customary squatting posture, covered, except when in use, by a hinged, self-closing lid. Commode pails underneath are served from the rear and their rims fit tightly under the margin of the apertures. Thus, except when in actual use, there is no odor disseminated and no avenue of entrance to the disease-bearing fly.

For the use of the patients above the basement floor, each group of wards or private rooms has its set of bathrooms and closets; those for the wards being located in two special towers, projecting well out from the main building. These towers are provided with a special service stairway and ventilation shaft, and are cut off from the main corridors

by spring doors. As they have floors and wainscoting of cement, and the commode system will be even more carefully arranged than for the outdoor latrines, it is hoped that regular cleansing twice a day, with frequent inspections by the doctors, will ensure good sanitary conditions.

THE WARDS.

The general character and disposition of the wards may be best understood from an examination of the plans. The large wards are twenty-two by sixty feet and accommodate sixteen patients. This is about the ideal. Between each large and small ward is a room for the nurse on duty with windows opening into both wards. This room is to serve also for ward medicine cupboard and diet kitchen.

Of the twelve private rooms occupying the Southern front of the upper floor, the two in the centre over the chapel are reserved for foreign patients, and the two end groups of three each will furnish temporary quarters for the eight male and eight female student nurses of a Nurses' Training School to be organized in connection with the opening of the new hospital.

An isolation ward will be built in the extreme rear of the hospital compound.

WATER AND HEAT SUPPLY.

A deep well is located in the centre of the service court. Thence water will be conveyed by force pump and wind mill power to an eight feet by eight feet galvanized iron tank in the roof, and thence throughout the hospital, with branches also to the dispensary, kitchen, laundry, outdoor latrine, and to the doctors' residences. The system will supply hot water as well as cold.

The system for heating is rather composite. The hot air registers for the major operating room have been already described. The offices and private rooms will be heated with open fireplaces, and the wards with stoves. Someday perhaps it will be possible to introduce a hot water radiator system, which at present is impracticable on account of the expense of installation.

SERVICE DEPARTMENT.

A reference to the plan of the service department will show these desirable features among others.

They are disposed on the rear or North aspect of the main building, leaving the South, East and West aspects for lawns and shrubbery for use of convalescents.

The service department is detached, yet not inconveniently remote from the main hospital building.

It is connected with the service stairways of both departments by covered arcades, not to be used by patients.

The exclusion of patients from the service precincts and the specialization of responsibility is rendered possible by the system of separate courts for general service, for servants quarters, and for laundry.

Separate servants' dining rooms will improve greatly the kitchen discipline, as well as afford the servants a sitting room when off duty.

The kitchen and laundry fires are fed from the adjoining fuel rooms, and in the kitchen a hood ventilator over the stoves will carry the smoke and fumes through the roof.

PRESENT ACCOMMODATION AND FUTURE EXTENSIONS.

At present the hospital will accommodate sixty beds for men, twenty-five for women, and fifteen for children, giving a total of 100 beds in all.

The removal of the trained nurses' quarters into a detached building would double the number of private rooms.

The extension of the wards for women to their full size would double the accommodations for women and children.

The men's department can be indefinitely enlarged by adding a detached pavilion or two of one or more stories to the West of the present wing, with which it might be connected by glazed corridors.

THE PROPORTIONATE COST OF PARTS OF HOSPITAL PLANT. (In Mex.)

Five acres of land for hospital compound, $12,000; main hospital building, $35,000; the service annex, $1,500; the dispensary, $3,000; the three residences for doctors and nurses, $12,000; the compound and two residences for the Chinese internes, $1,500; the compound walls, walks, grading, etc., $3,000; the hospital equipment, about $7,000; making a sum total of $75,000 Mexican.

My last word is this. Let us aim to embody in the planning and construction of our hospitals the strong faith that their service to Christianity and to China is not transient, but to increase with the years, until, no longer mission but self-supporting, they become the hospitals of the great Chinese Church of the future.

THE POSSIBILITIES OF SCIENTIFIC RESEARCH IN MEDICAL MISSION WORK.*

By S. R. HODGE, M.R.C.S., L.R.C.P., Hankow.

My first duty is to thank you for the honour you have done me in electing me as your President, for I feel that our Association has now won such a position for itself that any man may feel proud, and should feel proud, of being elected your President. Looking back as I now do to the meetings of the little Society, that nearly twenty years ago was the forerunner of this larger one, I not only rejoice in the vigour and influence we have attained, but I am deeply thankful for the work we have been enabled to do. I believe we can do much more and we must do much more, and the object of my brief address is to indicate the lines along which I think we can best proceed.

Now, at the very outset, it is necessary to give a wide and liberal interpetation to the words "Scientific Research," not because the kind of research I would advocate is undeserving of the epithet "Scientific," but because we are apt to let our thoughts on any subject crystallise into rigid forms admitting of no variation. Scientific research at home is generally undertaken in well fitted laboratories, such as we cannot hope to possess, by men who may be considered more or less experts on their particular subject, which none of us are, and with an amount of leisure for the investigation which does not belong to us. But we must remember that a fine laboratory is not essential; that some of the best work has been done with meagre apparatus; that, although we may not be experts, the man who will devote himself to a compassable area of work will, in time, become very proficient, and, further, that we must look forward to a time when, with better trained assistants, we shall have more leisure and greater skill to give to this duty. The two difficulties that really stand in the way of doing such work are: (1) That most, if not all of us, have to be general surgeons and physicians and can scarcely neglect any one subject for the specialisation in another, and (2) That we have such a mass of heterogeneous work to get through—medical, surgical, evangelistic and administrative—that it is difficult to obtain the needful time.

In hospitals where two colleagues are working together, or where are there well trained Chinese assistants, a nice arrangement of work will generally give sufficient time, and as for the first difficulty, while regretting the policy of our Societies which has scattered us in isolated

* Presidential Address before the Central China Branch of the C. M. M. A., 1907.

ST. ELIZABETH'S HOSPITAL, SINZA.

MARGARET WILLIAMSON HOSPITAL, WEST GATE.

STAFFS OF TWO WOMEN'S HOSPITALS, SHANGHAI.

units in separate hospitals to the lasting detriment of the work, we must endeavour by co-operation to minimize the evil.

I think much may be done by *collective investigation* and putting many minds to work instead of one. In this way the deficiencies of one man will be supplied by the excellencies of another, results will be checked, mistakes corrected, and time, distributed amongst many, found for the accomplishment of our ends. Not only so, but the tendency of the individual worker, when he is a man of many interests, to erratic, impulsive and incomplete work, doing a little at this and a little at that, commencing many things and finishing nothing, will be replaced by the steady and continuous pursuit of one object until the end is obtained. My proposal, therefore, would be that the Society inaugurate at once a collective investigation, under the control of a small, select Committee which shall report yearly to the Society as to the progress of the work. This Committee should choose its co-operative workers from anywhere, direct and control their work, tabulate and co-ordinate their results. I would especially urge that no haste should be shown over this work; one or more years being spent, if necessary, over each subject; our chief aim being to assure trustworthy results, results which will commend themselves to all workers everywhere.

There are many diseases which very much need such an investigation as this. I would especially mention a classification of the various forms of mosquitoes found here and a tabulation of the varieties and complications of malarial fever met with. The subject of the various anæmias needs going into thoroughly; ankylostomiasis is common in Hunan; is it here? Kala-azar has been found in Hankow and Peking; what proportion of the cases with large spleens and livers are due to the Leishman-Donovan body? We know little of its origin, but there is reason to believe that it is due to a trypanosome and that this is carried by some insect, just as the trypanosome of sleeping sickness is carried by the flomisa Palpali. If Kala-azar occurs here, can we confirm or destroy this theory? If we confirm it, what is the insect and what the area of its distribution? I feel sure that many anæmias are cases of spleno medullary leukæmia and probably other forms of leukæmia occur, including splenic anæmia or bantis disease.

The whole subject of helminthiasis needs further elucidation here, and lately, some of us have felt that the occurrence or otherwise of Malta fever in Hankow needs enquiring into.

These are only a few of the subjects which occur to me; others will be suggested during the discussion. We have abundance of material and shall be embarrassed by the plethora. The question is not, "Is

there anything that needs doing," hut rather "Where shall we hegin"? Ladies and Gentlemen—we shall not, I am sure, feel that such research work is not the work of a missionary. Such work, done accurately and well, will help us to save the lives of hundreds who come to us, and now that the training of native doctors is being seriously undertaken, will enahle us to place them in a position to save thousands more. We are here to save life, life physical, and through it life spiritual.

I feel proud that, as a Society, we are a continual stimulus to others to work well. I helieve such workers all over China will rally to us and, if we undertake this thing now, although small in its beginnings it will grow to an important hranch of our programme and hring unthought of good to this suffering people among whom we live. Let us begin at ouce, let us begin to-day.

"IN MEMORIAM."

SYDNEY R. HODGE.

I first came to know Dr. Hodge in connection with the Hankow branch of the C. M. M. A. soon after I reached Hankow in 1889. He claimed me as a memher and rejoiced in the fact that by my arrival they would have one member hesides chairman and secretary, and so the ehhing life of the hranch could he resuscitated. The Association was then aud ever has heen dear to his heart, and he always maiutained that it acted as a stimulus and help to him in his work.

During these seventeen years I have had the joy and privilege of being his neighbour, colleague, patient and guest.

Through his death many in China have lost a strong, loving, true, Christian friend. He was widely read, stroug in intellect, gifted in music, and endowed with much power in preachiug.

On these sides of his life I will not touch, but only write a few words in loving tribute to his worth, aud work as a medical missionary. Hodge had a most striking personality, hoth in physique and iu character.

Though a little stern iu manner his heart was most loving and sympathetic. In sickness or trouhle no truer friend thau he could be found, and though his stray opinions and feelings made him a great fighter in argument, or discussion, yet his innate goodness soon healed over the breach and made the rough places smooth. He was a strong, straight, painstaking man, possessing that rare gift—a well balanced scientific mind.

The standard he set up for himself, his work, his patients, his surroundings, was "*The Best.*" He was satisfied with nothing less, and the strain and stress which this inevitably involved largely accounts for his comparatively early death. No half-up-to-date methods or work for the Chinese were allowed by him. His aim was quality rather than quantity, and he saw to it that his directions and lines of treatment were strictly carried out. He has raised a standard of Medical Work in Central China, the influence of which will be felt for years to come.

The notes he took on his out-patient cases, the care he bestowed on his in-patients, going round at night to write up their histories and examining them most carefully with the opthalmoscope, etc.,—these were factors in giving him a thorough and wide grasp of his professional subjects and laid a foundation which enabled him to diagnose and treat with assurance and inspire confidence. His care in diagnosis, and his determination to get to the bottom of things, was ever an inspiration and strength to those of us working by his side.

With all his zeal as a medical man he never lost sight of his call to the miuistry of souls and ever sought to lead his patients to the Saviour.

Is it any wonder, after twenty years of such ministrations in Central China, amongst the colleagues of his own Mission, the visitors at Kuling, and above all the thousands of Chinese who have received treatment at his hospital—is it any wonder that hearts are sad and that a sense of mourning has spread over the land?

Only recently he read a paper at our Conference and joined with us on committees, giving us his advice in regard to the developments and schemes which are now on hand.

And now after two short months he has gone! Our cause has lost a most valued worker, our Association one of its strongest supporters.

For five or six years he had been failing in strength. Malaria had laid hold upon him and he was troubled with a condition of the nature of sprue. During the past year or two some obscure renal and cardiac symptoms caused alarm to himself and his friends. Had it not been for the fact that he was able to spend July and August up at Kuling he would have been out of China some years ago. During these two summer months at Kuling he was constantly busy treating patients, administering the State, and working for the comfort and weal of the community. His practice amongst foreigners was done often at great cost to himself, but prompted by a desire to relieve suffering and with a view to getting support for his hospital in Hankow.

He fell in harness. After a strenuous and busy time in Hankow he weut up to Kuling. Reaching his bungalow weary and fagged he went straight to bed, and from his bed, he never got up again. High fever set in, tbe heart and other organs gave out, and all the loving and skilled help of his colleague, Dr. Booth, and those around him could do, was in vain. He fell asleep in the Lord on Sunday, 21st July and lies buried on a knoll looking towards that beautiful spot—"The Temple iu the Clouds"—tbe temple where he had planned to enjoy a picnic on his coming birthday in August.

Tbe Master willed it otherwise and called him home to the city whicb hath uo temple, for the Lord God Almighty and the Lamb are tbe Temple thereof; and the glory of God did lighten it and the Lamb is the light thereof. And the nations of them which are saved, shall walk in the light of it, and the kings of the earth do bring their glory and honour into it; many we believe having been led there by the life and influence of our beloved brother Sydney R. Hodge.

CECIL J. DAVENPORT.

IN MEMORIAM.

REV. SYDNEY R. HODGE, M.R.C.S. & L.R.C.P. ENG. WESLEYAN MISSION, HANKOW.

We feel sure that the above heading will come as a profound shock to many, all over China, especially to those who were privileged to be at the meetings in Shanghai, both of tbe Medical Missionary Association and the Centenary Conference. Dr. Hodge was present at both of these gatherings and spoke apparently with his accustomed vigour and freshness. Early, however, on the morniug of Suuday, July 21st, among the hills of Kuling, where he had gone seeking physical and mental rest, God came and touched him and called him to tbe bigher rest above. Malignant malaria, with cardiac aud renal complications, was the cause of his death. Everything that medical skill and loving care could devise, was done for him, but his hour had come, and it was with glad willinguess that he obeyed the summons to enter the presence of the Master he loved so well and had served so faithfully.

His removal in the very prime of life, for he was just forty-nine years of age, leaves a wide gap and one that humanly speaking cannot be filled. Very genuine was the sympathy felt for Mrs.

and Miss Hodge in their great sorrow, and some 200 at least must have followed the cortège to the grave in the little cemetery, but recently opened in Kuling, it having been Dr. Hodge's own wish that here his body should be laid to rest. Not a few will visit that grave from year to year as the summer comes round, and will silently pay their tribute of love to the memory of their helper and their friend.

Dr. Hodge was an honour to the medical profession, and in China was one of its most distinguished members. He was a devoted missionary, ever seeking the good of this nation to whom he was sent. His early death is in no small part due to want of proper rest, for he spared not himself in seeking to help others. He was educated at the Leys School, Cambridge, and while there was Captain of the School. He took his medical course at the London Hospital and held there the position both of House Surgeon and House Physician; but further, he took a course of training at Richmond College for the Wesleyan Ministry, and was ordained and appointed to China in the spring of 1887. He has thus been engaged in missionary work for just over twenty years. His station was Hankow, in the very heart of this great Empire. Medical work in connection with the Wesleyan Mission had been begun there in 1862 by Dr. Porter Smith, and later had been carried on by Drs. Hardie and Langley, but for nine years previous to Dr. Hodge's arrival there had been no medical man in charge, and Dr. Hodge had to begin the work de novo. Being full of energy and enthusiasm the work grew in his hands. Building after building was erected, until now there is a large well-appointed Men's Hospital, with Bacteriological Laboratory attached, the work requiring the care of two medical men, English matron, and trained staff of Chinese nurses. There is also a fine Women's Hospital under the charge of a woman doctor and foreign nurse, and with an exceptionally well trained staff of native nurses. This is surely a result for which to be thankful.

Dr. Hodge was made President of the China Medical Missionary Association in 1901 and also served as Editor of the Journal, and he has ever been one of the most regular contributors to its columns.

In looking back over this life, for we have known him ever since his arrival in China, there are two or three features that strike us as standing out prominently, and foremost among these is *thoroughness*. No one who knew Dr. Hodge failed to realise this as one of his leading characteristics. Was it building a hospital?—then the plans and

materials must be the best obtainable. This would cost money! then the money must be found; and it *was* found. The up-to-date home hospital was his ideal, both in the building, furnishing, bedding, etc. He did not want anything second-rate. Was it the treatment of a patient? then the examination must be searching and thorough before any treatment was attempted, and this was the case whether the patient was a poor coolie or a brother missionary. On one occasion a rich patient, paying one dollar a day for his room in hospital, seeing the care bestowed on the very poorest remarked, 'I don't see why I should pay a dollar a day. I should be quite satisfied with the treatment given to that coolie!' Dr. Hodge had a well furnished medical library and made good use of it, so that his patients always had the benefit of the latest discoveries in medicine and surgery. More might be said on this head, but space forbids.

A second characteristic of Dr. Hodge was his *straightforwardness.* There was no beating about the bush with him, he went straight for the mark. He abhorred shams and was not afraid to say so. This gave a certain brusqueness to his outward bearing which over-impressed casual observers, but beneath this rough coat there beat one of the tenderest of hearts. Those who were privileged to know Dr. Hodge felt that tenderness, and loved him and were loved in return.

One other quality we should like to note in our friend was his *reverential piety.* To hear him preach or engage in prayer was to be lifted up to the unseen. He walked closely with his Master, he walked in *reverence.* To us this was one of the qualities that drew us most to him, for through it he drew us to his Saviour.

Dr. Hodge will be missed not only in his own Society, where his wise counsel was growingly relied on, where too the hospitable home of himself and Mrs. Hodge has been a welcome haven of rest to many, both in sickness and in health, but in a wide circle of many Societies he will be sorely missed. In Kuling, too, where he was a member of the Municipal Council, he was widely known, respected and loved. There he organised and conducted the Annual Sacred Concert. He loved music and was an accomplished pianist. Much more might be said to show the greatness of our loss. It is hard to realise that that active, strong personality is gone from our midst, but as we look back on that life, it breathes into us fresh inspiration to be nobler, purer and more holy than before, so that 'He, being dead, yet speaketh.'

THOS. GILLISON.

KULING, August 4th, 1907.

IN MEMORIAM.

Whereas, God in His infinite wisdom and love has called to His higher service our beloved missionary brother and fellow-physician, Doctor Sidney R. Hodge,

We his fellow-members of the Kuling Branch of the China Medical Missionary Association, desire to express to his family our deep sympathy in this, their great bereavement, and our confidence that the Great Physician Himself will bring to them comfort and courage sufficient for their need.

While mouruing his loss and realizing in some small measure how much the removal of his leadership will mean to us, nevertheless we look back with gratitude for all the days during which we were privileged to he associated with him, and record our appreciation of the deep personal influence exerted upon us by his strong individuality and by his Christian character.

We thank God for the ministry of healing in which he was so long engaged ; for the eucouragemeut he gave and the stimulus he was in himself to the search after means of healing ; and for that vast multitude of men and women, both Chinese and foreign, to whom was granted restoration to health through his instrumentality.

And we rejoice, most of all, in his service to China as a messenger sent of God ; that in all his medical work his chief aim was to reveal God's love to this people, setting forth in word and in daily life that strong faith in a personal Father and a personal Saviour of mankind which was the impelling motive in his own life.

Resolutions adopted at the regular session of the Kuling Branch of the China Medical Missionary Association, July 23, 1907.

O. T. LOGAN,
Hon. V.-Prest.

GEO. F. DEVOL,
Hon. Secy.

In Consultation.

A man aged thirty-five came to the hospital with a mixed cavernous and capillary nævus, into the cavernous part of which he had scratched a hole. The bleeding from this had been so severe that on two occasions he had fainted from loss of blood. The capillary part was diffuse over the left side of the face. The cavernous part reached from about half an inch below the lower edge of the lobule of the left ear to just above the upper edge of the ear, and followed the front edge of the ear all the way up being about one inch broad. It formed a thickish mass evidently extending into the parotid gland and a part of the helix of the ear was also affected. A small hole the size of a pin's head was present in the lower part of the mass, and this was plugged with a small piece of twisted paper. When the paper was removed a small stream of blood shot out with considerable force.

The difficulties of the case seemed to me to be these :—

Complete excision of the cavernous nævus seemed impossible without certain injury to the facial nerve. Excision of the cavernous nævus would also have been rendered very difficult by the fact that all the surrounding area was covered by the capillary nævus.

Ligature of the arteries supplying the nævus seemed impossible owing to the probability that the terminal part of the external carotid was itself involved. I therefore decided to enlarge the existing hole and see if the bleeding points could be tackled locally ; the proceeding was, as you would suppose, utterly futile, the blood welling up from all points of the compass. I therefore proceeded to cut down on the external carotid at the usual place in the neck and tied that vessel. The hæmorrhage was then fairly easily controlled by a few ligatures. The case has done well. The nævus appears slightly but not greatly reduced in size.

Was the treatment the right one ? I am dissatisfied on this account. The nævus was certainly to a great extent a mass of cavernous venous sinuses, though I understand that the arteries to these cavernous nævi are always much enlarged. It does seem a clumsy way of tackling what is principally a venous dilatation by tying a main artery of considerable importance. Yet how to have set to work to isolate the feeding veins I have not the least idea.

JAMES S. MAXWELL,
Tainan, Formosa.

Answers to the above should be forwarded to Dr. A. W. Tucker, Shanghai.

HOPE AND WILHELMINA HOSPITALS, AMOY.

NEW HOSPITAL OF A.B.M.U., HANYANG. RECENTLY OPENED.

The China Medical Journal.

VOL. XXI. SEPTEMBER, 1907. NO. 5.

Editorial.

TO S. R. H.

God speed, Beloved, in thy larger living!
Full strong thy manhood, on to strength yet going.
Gracious the call from doing unto doing,
Withholding not the work in age and grieving.

The many talents to the master server,
We never shall attain thy taken treasure.
'Tis well: In void and yearning we may measure.
The stature of the master's Master, ever.

Z.

It is with feelings of profound sorrow we sit down to pen our Editorial column for this issue of our JOURNAL. The call has come to one who occupied a foremost place not merely in the ranks of our medical missionaries but also in the medical profession in the East. We little thought when listening to the counsels and advice uttered during the recent Conference by our dear friend and colleague, the Rev. Dr. Sydney Rupert Hodge, that within a few brief months we should be called upon to mourn his "homegoing." Unexpectedly the call came, and "he was not!" This is not the column to enter into particulars of his life and work. From the pens of two of his friends in our medical circle appear words of appreciation. Still it is but right that we should briefly draw attention to the noble work which this devoted servant of our Master wrought during his twenty years in China.

In 1887 Dr. Hodge came to China in connection with the Wesleyan Methodist Missionary Society, and was appointed to Hankow. Of his work in connection with that Society we need

say nothing. One has but to visit the Men's Hospital, Hankow, to appreciate the noble life and devoted service of him who is gone. In 1887 no hospital and no organised medical work; twenty years later one of the finest Mission hospitals in the East. To him alone is the credit and the glory due humanly speaking.

We must, however, look upon his life's work from a broader standpoint that than of his own Mission. Dr. Hodge was not merely a member of the W. M. M. S.; he was essentially one whom all can claim. His influence was felt throughout a wider sphere than that provided by his own Hospital Mission. To his untiring energy is due the formation of the most enterprising branch of our C. M. M. A., the Central China Branch, and during the years that have elapsed since its inception his personality has been one of the prominent features of that association. Every office in connection with it has been filled by him, and the President's chair has been occupied several times. In connection with the larger and parent association he took a prominent part, occupying the editor's chair for several years. A glance at the files of our issue during his term of office will show how thorough and up-to-date he was in the management of our Journal. Later he had the honor of being our President, and during his term of office took an active interest in the well-being of the Society. His articles, which have appeared so frequently in our pages, have all been marked with evidence of the same thoroughness and up to dateness. He never allowed anything to proceed from his pen that was not worth careful and attentive perusal by one and all amongst us.

He was always ahead of the times, and we are glad to know that he was spared to see many of his suggested advances accomplished facts. In the early years of his work in China he realised the possibility of trained Chinese nurses in the wards of our hospitals. Nurses who should no longer occupy the position of ward-coolies, but who should be possessed with the true spirit of a nurse, desirous to help and alleviate the sufferings of their fellow-men, and men who would not be ashamed to do unpleasant tasks for the Master's sake. Many were inclined to laugh at his proposals, and at least to doubt the possibility and the advisability even if it were possible. With untiring perseverance he steadily pursued his

way and proved the possibility and also the advisability of his contention.

Many in the early days doubted as to the advisability of introducing trained lady nurses into men's hospitals. Dr. Hodge, after an uphill fight, proved this also, and many follow where he led. Medical education of Chinese students through the medium of English was an object he had in view for many years and, though again and again his object was defeated, he lived to see a medical school along his suggested lines established in Wuchang. In connection with the scientific branch of our work he was one who always strove to keep it in the forefront, and one of his latest suggestions of a research committee has been carried into effect in connection with the C. C. M. M. A.

In such a brief notice as this it is impossible to give a true idea of what our brother was as a man, as a missionary, and as a doctor, a true loving friend, a sincere and helpful colleague, a devoted missionary, a skillful and experienced doctor. To all who came in contact with him, he was ever ready with his help and sympathy and counsel. No one in sorrow or difficulty ever applied to him in vain. To his juniors in the profession he was ever the wise and careful consultant and never failed in the time of emergency.

And now he is gone! The call came and found him ready. He has left behind him a noble work, and while we mourn his loss, we rejoice in the memory of his life and in the thought that now he is at rest with his Master.

INTRAMUSCULAR INJECTION TREATMENT OF SYPHILIS.

In order to attain any degree of success in the treatment of syphilis in China; and the proportion of our patients in which syphilis enters, at least as an important factor, is enormous, (some think as high as fifteen or more per cent.) the following conditions for treatment should be aimed at:—

1st. To use the short time the Chinese patients will allow us to produce the maximum effect on the disease.

2nd. To inconvenience the patient, who is often able to attend to his business if permitted, as little as possible.

3rd. To avoid disgusting the patient by remedies "too strong" for his stomach. *Mercury* for instance.

4th. To keep from filling up our wards with infectious patients who can just as well as not be treated outside.

We believe that the intramuscular injection treatment, using *salicylate of mercury*, will meet these conditions as nothing else will, and is applicable throughout the secondaries and mild tertiaries; in other words it fits practically all ambulatory syphilis, subject to exceptions which on trial will be found so few as to only serve to prove its worth. So firmly are we persuaded that this is the treatment *par excellence* for routine use in mission hospitals that we have asked Dr. Olsen, U. S. N. of the U. S. S. *Galveston* to outline his method of application, which we here quote in full.

Materials required.

1. Hypodermic syringe. Two-inch rather strong needle.
2. Salicylate of mercury.
3. Liquid albolene. (Liquid petrolatum.)

Site of Injection.

Into the buttocks, into the glutei muscles, above Nelaton's line.

Buttock scrubbed with soap and water, alcohol, then painted with *tincture iodine*. Injection given at right angles to buttock and extending into the buttock about one-half to two inches.

Dose.

Ten per cent. emulsion of *salicylate of mercury* in liquid albolene used. Twelve minims of this given once a week, using the buttocks alternately.

Routine.

Treatment consists in a series or courses of injectious and intervals. During the intervals patient is kept under observation, and if symptoms appear, treatment is recommenced.

Injections started when the rash over the abdomen confirms the diagnosis. First course usually consists of about twelve injections. Then the interval of usually six to eight weeks. K. I. may be given in small doses during the interval. Then the second course of about ten injections, then an interval, etc. During the second year the courses of injection become shorter with longer intervals.

Precautions.

After needle is introduced, detach syringe to note if any blood vessel has been entered. If this happens (about once in forty times), withdraw needle and insert in a new place.

Seal puncture after injection with *collodion*.

Boil needle after each injection.

With aseptic precautions as above abscess is very uncommon, occurring probably not more than once in a thousand injections. Induration and soreness occasionally occur, but very rarely of any consequence.

Symptoms in secondary cases disappear rapidly. Salivation, etc., is very uncommon with this method of treatment. Digestive disturbances, diarrhœa, fœtid breath, etc., are avoided. Especially valuable in obstinate cases and syphilis of the nervous system where a quick effect is desired. The pain on introducing the needle is very slight ; most of the patients hardly noticing it.

Where a Chinese patient might stay in the hospital grudgingly for a couple of weeks he may be persuaded to come to the clinic once a week for a rapid injection, almost indefinitely. The action is constant owing to the slow absorption of the drug, and we have the great satisfaction of seeing and knowing that the *mercury* really gets inside the patient and do not have to simply take his word for it.

THE FECAL INVESTIGATION SHEET.

The following sheet may be obtained in any quantities desired by those intending to join in the investigation as arranged by the Research Committee. Application should be made to the editors. Even a series of fifty stools is worth reporting and will materially help the value of the total.

Investigation of fæces.

No. of Sheet..... Station..... Date.....

Nature of Ova, etc., with approximate number per slide.

No.	Sex.	Age.	Employment.	Disease.	Ascaris.	,, × egg.	Trichocephalus.	Ankylostomum.	Other eggs.	Protozoa, e.g., Amoebæ Trichomonas Cercomonas.	Other points of interest noted in stool, e.g., Charcotleyden crystals, etc., etc.
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											

No. in series..... (This number should only be filled in if the cases form a series of consecutive examinations; not if specially chosen because symptoms point to one of these infections.)

If possible enter males and females on different sheets.

Signed.....

NOTES.

One of the Editors is eager to complete his personal file of the Journal, which yet lacks the following six issues:—

Vol. III. 1889—Nos. 1 and 2.
,, V. 1891—No. 1.
,, VII. 1893—No. 1.
,, VIII. 1894—No. 3.
,, XIII. 1899—No. 4.

He will be very glad to pay a fair price for them and grateful to any of the older members who have these issues to spare. Please write to the Editorial Office, 4B Minghong Road, Shanghai.

At the Annual Meetings of the Scots and Irish Missions in Manchuria held in June, the medical staff formed a MANCHURIAN BRANCH of the C. M. M. A., thereby adding six new members to the parent Association. Dr. Greig, Kirin, was elected President and Dr. Walter Phillips, Newchwang, Secretary.

Dr. Avison writes from Seoul:—"A call has been issued for all the doctors in Korea to meet September 9-11 in Seoul for the organization of a Korea branch of the C. M. M. A., and we hope it will be an interesting and profitable time. The 'Fecal Chart for China' in the July JOURNAL is a good idea and will promote research more than any amount of printed matter, as there is more gathered on one page than can be found elsewhere and it simplifies the search and recognition. I have been drilling our senior students in this work, and next year we hope will show an advance. The meetings in Shanghai were a help and inspiration to all and we are sure there will be fruit."

The other branches of the C. M. M. A. are:—The CENTRAL CHINA BRANCH and the KULING BRANCH. There is also a Fukien Medical Missionary Society (Foochow), but it has not yet formally joined the C. M. M. A. No word has yet come of the formation of the proposed Peitaiho branch.

There certainly should be a branch at every large centre and every summer resort. If possible let every medical missionary in China belong to a Branch Society. It will do more than almost any other plan to strengthen and unite us and create the much needed *esprit de corps*.

Let us all get to work and carry this out now.

Perhaps there are some engaged in teaching who have not used *Plasticine*. The writer can speak from experience of its value in demonstrating the shape of normal and pathological objects. Students who can with it produce models of the bones, muscles, viscera, brain, different varieties of cells, pathological changes in the organs, etc., etc., have a much better idea of these objects than can be obtained from diagrams, no matter how skilfully drawn.

Plasticine, a substitute for modelling clay which does not dry and can be used indefinitely, is made in various shades for contrast effects, and can be bought in Shanghai.

PUBLICATION COMMITTEE.

Books on Sale :—

Dr. Neal's Eye Diseases.
Dr. Neal's Skin Diseases.
Manual of Nursing.
Dr. Fulton's Gynecology.

In the Press :—

Dr. Cousland's Physiology, 3rd Edition.
Anglo-Chinese Medical Lexicon.
Dr. Niles' Obstetrics.
,, Venable's Bacteriology.
,, Cousland's translation of Osler.
,, Ingram's Therapeutics.

As none of the works now in the press can be ready for three or four months yet, will those who *urgently* require any of them please communicate with the undersigned, who will arrange to forward the sheets as they are printed. These can afterwards be returned for binding. Nomenclature problems are responsible for much of the delay. Correspondence invited.

PHILIP B. COUSLAND,
2 Shantung Road, Shanghai.

SUBSCRIPTIONS TO THE PUBLICATION COMMITTEE FUND.

Dr. Claud Lee	$ 5.00
,, Annie Hamilton	3.00
,, J. Dow	4.00
,, S. Cochran	20.00
,, D. D. Main	10.00
,, Layton	10.00
,, F. J. Tooker	10.00
,, G. A. Stuart	20.00
,, E. H. Hume	10.00
,, J. MacWillie	5.00
,, J. H. Greig	20.00
,, J. E. Miller	6.00
,, M. McNeill	5.00
,, W. Phillips	10.00
	$138.00

Funds are urgently needed.

CONSTITUTION AND BY-LAWS OF THE MEDICAL MISSIONARY ASSOCIATION OF CHINA.*

CONSTITUTION.

ARTICLE I.

This Association shall be called the MEDICAL MISSIONARY ASSOCIATION OF CHINA.

ARTICLE II.

The objects of the Association shall be—

I.—The presentation of the Gospel through the art of healing, to the Chinese people.

II.—*a*. The cultivation and advancement of the science of medicine in general.

b. The imparting of a knowledge of the same to the Chinese, through teaching, as well as by the preparation of medical literature in the Chinese language.

c. The promotion of a spirit of mutual helpfulness, among the members of the medical profession, in this and neighbouring countries.

* Revised and adopted at the Conference in Shanghai, 1907.

ARTICLE III.

All members of this Association must be graduates of some recognised Medical College, and shall be divided into three classes as under—

I. *Active members*, who shall be engaged in Medical Missionary work in China or other parts of the East.

II. *Corresponding members*, being medical practitioners, engaged in private practice in China or other parts of the East.

III. *Honorary members*, who shall be composed of non-resident medical missionaries throughout the world, and of such other medical graduates as may be duly elected by the vote of the Association.

ARTICLE IV.

a—Active members shall be elected either by the vote of the Association in general meeting assembled, or by having become members of Local Branches, or on the proposal of two active members, names being sent to the Editor of the JOURNAL for insertion in the next issue of the same. After a period of six months, should no objection be raised by any other member, they shall be declared elected, and shall be notified by the Secretary to that effect, and their names shall be published in the JOURNAL as duly elected members.

Objections to the election of a member shall be forwarded in writing to the Secretary, and shall by him be laid before the Executive, who shall have discretionary power to act on behalf of the Association.

b—Honorary and Corresponding Members shall be elected only at the general meetings of the Association, on being proposed and seconded by two active members and on receiving a majority of the votes cast. Such members shall not be entitled to vote.

Persons of every nationality shall be eligible for membership in this Association.

ARTICLE V.

Local Branches of this Association may be formed by any three active members, provided the Constitution of such Branches is in full harmony with the Constitution and By-Laws of this Association. All members elected to Local Branches shall be *ipso facto* members of the parent Association. The election of new members to these Branches shall be duly reported to the Association Secretary, and an annual statement of their progress and membership shall be forwarded to him for publication in the JOURNAL.

ARTICLE VI.

The Officers of this Association shall consist of a President, Vice-President, a Secretary and Treasurer and an Editor or Editors, all of whom shall be elected tri-ennially, either by a majority of those voting at a general meeting, or failing this, by voting papers sent out through the MEDICAL JOURNAL and returned to the Secretary. These Officers shall constitute the Executive of the Association, and shall have the power to elect special committees from their own body, or from among other active members, to fill up any vacancies (caused by death or otherwise) in the Executive, and to take initiative in all matters affecting the welfare of the Association.

No member shall be elected to the office of President for two successive terms.

ARTICLE VII.

This Constitution may only be altered by a three-fourths majority vote at a general meeting of the Association.

BY-LAWS.

1. *Meetings.*—The stated meetings shall be held tri-ennially at the call of the President of this Association.

A Special General Meeting may be called by the Executive on the request of not less than thirty active members, after at least three months' notice of the same has been given in the JOURNAL.

2. The President, or in his absence the Vice-President, shall preside at the meetings, and enforce the rules of order, appoint all committees not otherwise provided for, give the casting vote in case of a tie, and perform such duties as his position requires. In the absence of both President and Vice-President the meeting shall elect its own Chairman.

3. The Secretary shall keep the minutes of both the General and Special General meetings, shall furnish the Chairman of each Committee with a list of its Members, shall keep a roll of all three classes of members, shall publish a revised list of the same annually in the JOURNAL, and shall conduct such correspondence as may from time to time be necessary.

4. The Treasurer shall receive and have charge of all the moneys of the Association, and shall pay all bills approved by the same. He shall annually report the condition of the funds, through the medium of the JOURNAL.

5. All motions shall be presented with the signature of the proposer, either directly to the Association or through its JOURNAL.

6. Each President on retiring shall become an Honorary Vice-President of the Association.

7. Yearly dues shall be $4 Mex. in advance, including subscription for the JOURNAL, and postage on the same.

8. The following shall be the order of business for each meeting, in the transaction of which Roberts' Rules of Order shall be enforced :—

1.—Calling the Roll of Members.
2.—Reading of the Minutes.
3.—The election of New Members.
4.—The election of Officers, and appointment of Permanent Committees.
5.—Reports of Officers and Committees.
6.—Business arising out of these Reports.
7.—Unfinished Business.
8.—New Business and Written Communications.

9. In the event of any important subject coming up, calling for the immediate action of the Association, the President and Secretary may issue circulars, calling for the votes of the members on the question at issue. The result of this vote, when counted by the Secretary shall be announced to the Members of the Association, and in the event of not less than fifty votes being received, it shall be binding on all members of the Association. The President and Secretary may use the columns of the MEDICAL JOURNAL in lieu of a circular when they deem it advisable so to do.

10. These By-Laws may be altered or added to by a majority vote at a regular meeting of the Association.

THE FOLLOWING IS THE LIST OF EXISTING OR PROSPECTIVE MEDICAL SCHOOLS UNDER CHRISTIAN INFLUENCE.

City.	Province.	Mission.	Language.	
Canton.	Kwantung.	Union.	Vernacular.	.....
Changsha.	Hunan.	Yale.	Mandarin.	.....
Chentu.	Szechuen.	Union.	Mandarin.	.....
Chinanfoo.	Shantung.	Union.	Mandarin.	.....
Foochow.	Fukien.	C.M.S.	Vernacular.	.....
Hangchow.	Chekiang.	C.M.S.	Mandarin.	.....
Hankow.	Hupeh.	L.M.S.	Mandarin.	.....
Nanking.	Kiangsu.	Union.	Mandarin.	.....
Peking.	Chihli.	Union.	Mandarin.	.....
Shanghai.	Kiangsu.	A.E.M.	English.	.....
Soochow.	Kiangsu.	M.E. South.	Vernacular.	.....
Tungkun.	Kwantung.	Basle.	Vernacular.	.....
Wuchang.	Hupeh.	A.E.M.	English.	.....
University.	Canton.	Univ. of Pa.	English.	.....

PRELIMINARY REPORT BY THE INVESTIGATION COMMITTEE ON THE "ANTI-OPIUM" PLANT.

(This matter was referred to the Committee with a view to the Association obtaining accurate knowledge on the subject.)

The plant has been identified as Combretum Sundaicum, Miquel, a woody climber abundant on the plains near Selangor and in the Malay Jungles. The flowers are white and the fruit red, the leaves are faintly bitter and acrid.

The average time required for a cure is five days to three weeks. The directions for use are as follows :—

"Cut the leaves and roots into pieces, weigh twenty ounces and roast for twenty minutes, spread on paper and allow to cool. Boil with four brandy-bottlesful of water, evaporate to half the volume and strain.

If a man has been in the habit of smoking five drachms of opium per diem, he must take five drachms of Extract of Opium, roast it over a flame and put it into a bottle of the decoction. A dose of one and a half tablespoonfuls is to be taken as often as the patient has been in the habit of smoking opium. Each time a dose is taken from the bottle it is replaced by the same quantity of pure decoction."

From a preliminary examination of the plant by Professor Crossley it appears that the decoction contains a substance of the tannin group, but no alkaloidal constituent was found. The fact that the leaves are roasted before use throws some doubt on their intrinsic utility.—(Extracted from the *Friend of China.*) J. P. M.

Further report on the properties of Combretum Sundaicum (Anti-opium plant).

Dr. F. B. Power, the Director of the Wellcome Chemical Research Laboratories, writes as follows:—

"With regard to the so called Anti-opium plant (Combretum Sundaicum) I may say that this was brought to my notice some months ago, but as it is being chemically investigated in other quarters, we are precluded, for the present at least, from giving it attention here. From the reports which have been more recently received, it appears somewhat doubtful whether the virtues attributed to it are inherent in the drug itself, especially in view of the fact that it is roasted or charred before use, which would destroy any active chemical principles it may contain and moreover it has been stated that an infusion of tea is equally effective."

In view of this letter and of the statements *re* the plant already printed the Committee does not consider it necessary to pursue the matter further. J. P. M.

Medical and Surgical Progress.

Progress in Internal Medicine.

Under the charge of EDWARD H. HUME, M.D.

SYPHILIS.

1. Etiology. Every investigator of standing who is engaged in studying syphilis seems to agree in the etiological relationship of Schaudinn's Spirochete pallida. Two recent papers, both from an ophthalmological standpoint add weight to this view. Schlimpert (*Deutsch. Med. Woch.*, 1906, No. 36, p. 1452) reports finding, in two heredosyphilitics, one stillborn, and one aged four weeks, spirochetæ in the conjunctiva, sclerotic and cornea, in the iris and choroid, and in the muscles of the eye and the lacrimal sac, confirming the opinion of certain authors as to the non-immunity of the lacrimal gland to the syphilitic virus. In both cases, the conjunctiva and cornea showed an infiltration of small cells, the choroid was congested and infiltrated, and the extrinsic muscles of the eye showed myositis. Most frequently the organisms were found within the vessels and free in the blood. Schlimpert believes that this myositis, apparently determined by the spirochetæ, is the cause of the strabismus which is so frequently found in heredosyphilitics. Greef and Clauseu (*Klin. Monatabl. f. Augenheilkunde*, September 1906, p. 293), while studying the effects of syphilitic inoculation of the corneas of apes and rabbits, found that in the beginning of the clouding in intersititial keratitis, spirochetæ were present; but that when the opacity became intense, they could no longer demonstrate in the cornea. A similar type of interstitial keratitis has been produced in lower animals by the presence of various species of trypanosoma.

2. Signs. (a). Crying. Sisto and Gaing (quoted in the *Journal of the A. M. A.*, June 8th, 1907, p. 1973) relate a number of instances in which very young infants cried vigorously, constantly and persistently, and this was accepted by them as a sign of latent syphilis. The symptom appeared soon after birth, and they attribute it to pains in the bones and periosteum, from irritation, similar to the pains in the bones of adults. As soon as systematic mercurial treatment was applied, the children ceased crying. In some cases it was the first and only sign of syphilis, but in others there were other signs or a suspicious family history.

(b). Atrophy of the base of the tongue. This was first recognized by Virchow as a diagnostic sign of syphilis. Its accidental finding in a case supposed to be a primary anemia, led Potter (*Boston Medical and Surgical Journal*, January 26th, 1906) to investigate the subject in a large number of patients. Lewin found a smooth atrophy in 103 of 6,583 autopsies (1.5 per cent.) and in sixty-nine of the 103 cases there was definite evidence of syphilis: this large proportion points to an etiological relationship between syphilis and the smooth atrophy. Sixty-two per cent. of the cases were over forty years old. That this sign should be more frequently

present in women than in men is due to the fact that primary and secondary syphilis is so often unrecognized in women and that they are the more often affected, relatively speaking, with tertiary symptoms. The atrophy persists longer than most of the other lesions of syphilis, and is due to an interstitial inflammation which terminates in a residual smooth atrophy in contradistinction to the ulcerative or gummatous process which terminates in cicatrices. Palpation was found to be the best method of examination. Although there is a marked difference between the plain, soft, velvety, cushion-like adenoid tissue at the base of the tongue (normal) and the firm, hard, smooth base in a markedly atrophic tongue with a few shot-like glands, so many cases showed variations that Potter subdivided his series into doubtful, probable and positive cases. He concluded that a normal condition of the base of the tongue is strong evidence of the absence of pre-existing syphilitic infection; secondly, that a typical atrophy of the tongue, in an individual below fifty, points to syphilis; and thirdly, that a moderate or slightly marked atrophy of the base is of little or no significance.

3. Treatment. Thalman (*Munch. Med. Woch.*, LIV., No. 13) explains the course of syphilitic infection as follows: The spirochetæ in the primary lesion die under the influence of *mercury*, and the endotoxins liberated by their destruction cause the production of a specific antibody. The immunity thus acquired gradually subsides, and the few spirochetæ still left alive commence to proliferate once more as the specific antibodies cease to be produced or lose their efficacy. This series of events occurs repeatedly, and explains the recurrence of the syphilitic manifestations. The effect of the endotoxins liberated from the bodies of the spirochetæ is very injurious for certain cells. In some cases there is complete absence of production of antibodies, and this may be the reason for the malignant course of syphilis in these cases. The fetal organism is unable to produce the antibodies and the placenta does not allow their passage from mother to fetus, and this accounts for the seriousness of congenital syphilis. Reasoning on the above premises, Thalman assumes that the rational treatment of syphilis consists in destroying the spirochetæ when they first invade the body, before they have had a chance to proliferate, but are still mostly engaged at the primary lesion. Prompt mercurial treatment kills them off, and the endotoxins liberated are small in amount compared with these liberated when the organism is swarming with spirochetæ. This first course of mercurial treatment should be followed by another course when close supervision of the patient shows that the immunity has reached such a low ebb that the spirochetæ are commencing to proliferate again, as shown by the development of a secondary lesion. He shows that more than 30 per cent. of the patients thus treated have shown no general symptoms during over six months which have elapsed, and in the others the secondary phenomena were restricted to a single focus or a few mild foci, none ever on the genitalia. At the first discovery of spirochetæ in the primary lesion he commences treatment with inunctions supplemented by local injections of 0.5 c. c. of a 1 per cent. solution of corrosive sublimate directly into the primary lesion, with or without the application of a mercurial salve to the nose. As a rule, no further manifestations of syphilis develop, but if such are observed, they follow much sooner

than usual, within from six to twelve weeks. When they appear they are less pronounced and fewer than usual. The metastatic affection was in the tousil in the majority of cases, and on the back, big toe or in the mouth in the others. The first appearance of the secondary lesion is the signal for the renewal of mercurial treatment to kill off the spirochetæ before they have had a chance to proliferate again. Oue great advantage of early treatment is that the secondary manifestatious spare the points previously treated with *mercury*, and according to the experience to date, do not develop on the genitals.

Sante (*Gazzetta d. Ospedali*, Milan, XXVII, Nos. 144-147, reviewed in *Journal of the A. M. A.*, May 25th, 1907) reports four cases of tardy local manifestations of syphilis in which ordinary mercurial treatment was apparently without effect. He then made a single injection of three-quarters of a Pravaz syringeful of a satnrated solntion of corrosive sublimate. After suspeusion of all treatment for several days, he took up the ordinary iujections, and rapid recovery followed. Corrosive sublimate dissolves iu water, one part to sixteen, and thus the saturated solution was sixty times liis usual dosage. A little *sodium chloride* was added to the solution and the injection was made into the buttocks. There were uo untoward effects.

Semon (*British Medical Journal*, January 13th, 1906) reports a case of precocious tertiary syphilis of the throat and tongue of malignant type. As soon as the hard chancre appeared, the patient had been put on full doses of *mercury*. "None of the ordinary secondaries ever appeared, bnt the patient got a tremendously swollen throat and tongue, and was badly salivated, ropes of saliva pouriug out of his month. The soft palate became œdematous, the tonsils, on each of which a large ulcer appeared, almost met in the middle. *Mercury* being left off, the ulceration gradually improved, the salivation diminished, and the patient went away to recoup, but returned with his throat again deeply ulcerated." This train of events was repeated several times; it becomiug finally clear to the writer that the affection was an unusually early tertiary manifestation of syphilis.

The patient was seut to Aix-la-Chapelle, and was at first treated with four injections of twenty-five per cent. *iodipine*, but the condition daily grew worse, and although the ulcers were painted with *nitric acid*, ten per cent. they showed no tendency to heal. The physician there became convinced that this reaction was in itself an evidence of the syphilitic character of the trouble. He then commenced the use of Zittmann's *sarsaparilla* decoction, with immediate and brilliant results. For twenty-six days, seven ounces of the stronger Zittmann's decoction was given every morning, and in the evening seven ounces of the weaker. This was followed for ten days by Kobert's *sarsaparilla* decoction, and finally the two Zittmann preparations were given for a fortnight. The ulcers were replaced by a solid scar. The formula of the Kobert decoction is as follows:—Place one kilogram of *sarsaparilla root* in coarse powder iu a closed vessel with four kilograms of distilled water, and set aside for three hours, occasionally stirring; heat and keep boiling for one hour, then press out. Repeat this once more. Evaporate the combined decoctions until there remains one litre, mix well with an equal volume of ninety per cent. alcohol, wash out the residue with half litre of boiling alcohol, straiu through flannel and

filter, evaporate to ½ litre or less. Establish the quantity of *sarsaparilla* and *sarsaponia* according to the method of v. Schulz Christophson, and adjust the strength of the finished product either by evaporating or adding distilled water, so that it shall contain two per cent. of the above glucosides.

Pathological Notes.

Under the charge of JAMES L. MAXWELL, M.D.

The accurate diagnosis of Malta fever gave rise to no little discussion at the recent meeting of the Association. It is therefore of more than usual interest to quote:—

A critical examination of the blood of patients in hospital, to determine if other than Mediterranean fever sera would agglutinate the Micrococcus Melitensis.—*Journal of Tropical Medicine*, May 15, 1907, by Fleet Surgeon P. W. Bassett-Smith.

The conclusions come to as a result of the series of investigations we give as follows:—

The blood of forty-one pathological conditions (150 patients) was tested, and in all but four cases there was no evidence of agglutination of the M. Melitensis. Of these four positive reactions, two appendicitis cases had lately returned from Malta hospital and were running a regular undulant temperature, and had undoubted Mediterranean fever. The third case was a sick berth steward, who had Mediterranean fever two years and ten months ago. The fourth was a long time in Malta hospital, where gastro-duodenostomy was performed, and though there is no definite temperature chart of Mediterranean fever, I have no doubt that he was, like so many others, infected by the micro-organism there.

All these examinations, therefore, gave an absolute negative to other than Mediterranean fever blood causing agglutination of the M. Melitensis in a dilution of 1-30.

Out of ten cases examined to see if lower dilutions gave erroneous results, only one gave any reaction—an abscess of the knee which agglutinated up to 1 in 10. Another important point investigated was: Are dead cultures reliable for any length of time? Using the control serum, the following dead emulsions made in the laboratory were tested, dilution 1 in 30:—

1. Prepared November 9th, 1903.
2. Prepared November 8th, 1904.
3. Prepared March 20th, 1903.

All reacted both microscopically and to the sedimentation test.

Thus dead cultures made more than two years ago were perfectly reliable, though the reaction is less rapid than when living ones are used.

From these results, and from a great number of the same kind, I have formed the opinion that, when using the 1 in 30 dilution (if the technique is properly carried out) a positive agglutination reaction may be considered conclusive of Mediterraneau fever, past or present. On the other hand, it would not be correct to state that the patient is not suffering from Mediteranean Fever when an examination of the blood gives a negative reaction with this dilution.

Some observations on blood serum reaction in Tubercle and Mediterranean Fever in Malta. By A. Critien, M.D., D.P.H.—*Journal of Tropical Medicine*, June 1st, 1907.

The conclusions given to this interesting paper are :—

1. Tubercular disease does not induce the formation of substances capable of agglutinating M. Melitensis in 1 in 10 and 1 in 20 dilutions.

2. Agglutinations 1 in 10 and upwards, obtained by testing blood sera against M. Melitensis, are due to a past or actual M. Melitensis infection, also in the case of patients suffering from pulmonary tuberculosis.

3. In the absence of the more reliable clinical symptoms of Mediterranean fever, careful and repeated auscultation of the lungs and repeated staining of any expectoration for Koch's bacillus are necessary to exclude the possibility of tuberculosis, even if the patient's blood has reacted positively against M. Melitensis.

Correspondence.

To the Editor of

"THE CHINA MEDICAL JOURNAL."

DEAR DR.: The other day my attention was called rather markedly to the remarks printed under my name in the report of the Conference, sent out by the *North-China Daily News*. Of course it is incorrect. My first thought was not to take any notice of it, as it (and myself) are of slight importance. But I could not bear the thought that any doctor should think I was fool enough to say anything like that.

It occurs in the report on "Medical Day." The resolution was in regard to the new men having two years for study, free from responsible work. An amendment was offered, cutting the time down to one year. Now I have suffered so much myself that I felt very anxious that the future new-comers should have every encouragement in getting a good mastery over the language. So I spoke opposing the amendment.

The statement had been made that a doctor needed a lot of study of the language before he could diagnose diseases among the Chinese. My purpose was two-fold : to urge that at least two years be allowed for study, and to point out that a doctor needed a good command of the language to do his proper evangelistic work. So I gave a few points from my own experience on a case in point. I said that "I had been five and a half years in the country, but had had only three mouths of uninterrupted study. As a consequence I had Chinese enough to diagnose the cases (not knowledge enough to diagnose any case) and could talk to the patients and preach a little. But when it came to personal conversation I was not able to do it. And I thought that was the most important work we could do." These are not the exact words, for I forget, but they are nearly exact.

I felt I must apologise to my brethren for even seeming to say that I knew enough to diagnose any case. I never even hope to get to that unattainable eminence.

There is another thing I have wished to write you about. It is regarding anti-opium pills. We have quite a little demand for them, and I hope the demand will increase. That is, I hope the Chinese will be

even more anxious to get rid of this curse. We all know that giving out pills to be used at home will not cure many. But only a few will come to stay in our refuges, while many are glad to take the pills. So I would like those who have had experience to send to the JOURNAL, if they will be so kind, the prescriptions they think most useful for such a purpose, that we less experienced men may have something to offer the people which we can feel is the best we can do under the circumstances. The Chinese who claim to have stopped opium (and their cure) used, almost without exception, some of the many pills made by the native stores. Surely we can give them something of more worth than anything they have.

Yours sincerely,

P. S. EVANS, JR.

YANGCHOW, July 3rd, 1907.

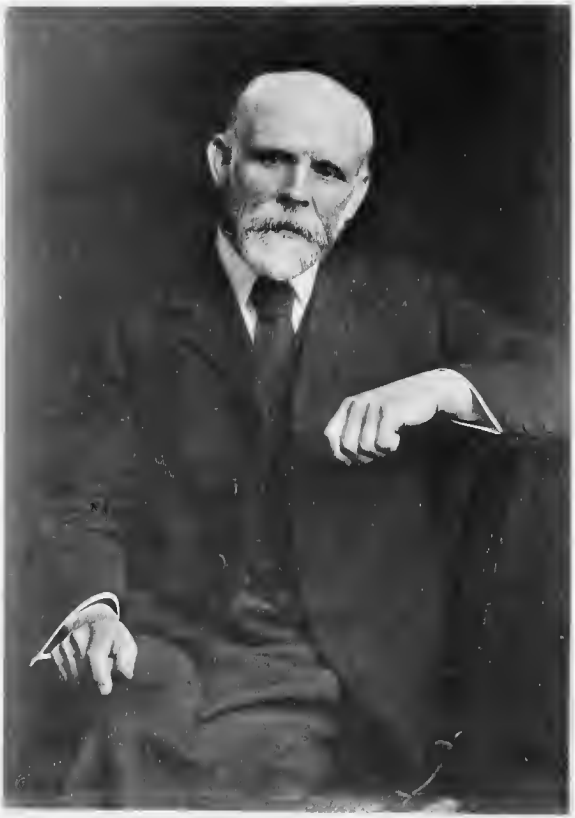
Personal Record.

BIRTH.

At P'ang-chuang, Shantung, on August 5th, 1907, to Dr. and Mrs. F. F. Tucker, a daughter (Margaret Elizabeth).

DIED.

At Siang-yang-fu, Hupeh, on June 30th, 1907, John Milton, only child of Dr. and Mrs. John Sjoquist, aged one year, four months and nine days.



DAVID GRANT, M.D.

See page 329.

The
China Medical Journal.

VOL. XXI. NOVEMBER, 1907. No. 6.

Original Communications.

[All copy must be in the hands of the Editors one month before date of publication to insure appearance in the following number. The editors cannot undertake to return manuscripts which are sent to them. A complimentary edition of a dozen reprints of his article will be furnished each contributor. Any number of reprints may be had at reasonable rates if a *written* order for the same accompany the paper.]

ASEPTIC AND ANTISEPTIC SURGERY AS APPLIED TO OUR CONDITIONS IN CHINA.

By EDGERTON H. HART, M.D.

The question bas ofteu been asked me in China as well as at home, Can you apply our modern methods in your surgical work? Invariably my auswer has been yes.

Our subject reads, Aseptic and Antiseptic Surgery as Applied to our Conditions in Chiua. Let us consider wherein the difference in couditions exists.

First. The lack of cleanly habits among our attendants.

Second. The mode of dress used by the Chinese.

Third. The undeveloped technical conscience as evidenced by cha pu to, swei bien, puh iao kin, etc.

Fourth. The necessity of economy in supplies.

Fifth. The short time we have our cases in hand for preparation.

My first endeavor is to have as few assistants as possible and train them well. Personally to teach them to cut their nails short, apply the nail brush and use sufficient soap and water as well as a liberal allowance of time for the work. Clean running water is an impossibility with the great majority, but three or four changes of boiled and filtered hot water answer the requirements. It is also necessary to constantly call the attention of attendants to the necessity of taking proper care of their hair and to see that the queue is not only well braided but kept out of basins, pails, etc.

To control the clothing of assistants as far as practicable by insisting on the purchase of washable underwear, the sleeves of which may be

rolled up to the elbow ; personally to inspect clothing and person of assistants and allow in the operating-room no one who has not bared his arms and well washed them to the elbow, and has wash clothing over his wadded garments.

The technical conscience is a matter of slow growth, and this need is at present partially supplied by their imitative qualities and known honesty of purpose. Dr. J. Clarence Webster in one of his lectures quotes from Dr. James, of Harvard, on the Psychology of Habit as follows :—

"That outer objects fashion themselves a chain of impulses from the brain. The influence of the outer objects, being felt often enough at last, waken consciously only the initial impulse, and the result is reflex action or habit."

"To concentrate forever upon the primary details of actions would result in no progress. Neither the surgeon or his assistant can afford such an expenditure of attention. The details must be left to what is known as the 'muscle sense,' the 'spinal centers' or habit. But while consciousness finally discards care of primary details, in the beginning consciousness must be unerring in seeing that muscles are never taught wrong." The aseptic habit therefore is a matter of time with every one, but in the learning time work must be done. One quality which helps largely is honesty. A man who falsifies can have no place in a well ordered operating-room. But as one is not omnipresent, appliances should be of the least complex construction and methods the simplest possible. My thought has always been that perfection lies along the line of simplicity both in methods of work and also in instruments used. Dr. A. J. Ochsner, of Chicago, addressing the American Surgical Association in 1904, said : "Surgery is more and more coming to be a very reasonable, logical profession, and in developing a system of aseptic practice one can count with much greater certainty upon the probability that every one concerned will carry out the details if he is expected to do things which would appeal to a sensible person than if he is expected to go through an unreasonable routine performance."

Under our fourth heading of economy in supplies we will note first the sterilization of instruments. The simplest and cheapest method being boiling in a *soda bicarbonate* solution. A very useful sterilizer may be made of an oil can cut in half lengthwise with cover fitted and inner perforated tray for containing instruments. Indeed the kerosene oil tin fills a variety of needs in dressing cans, bandage boxes, water boilers, waste cotton receivers, etc., enameled white on the outside. They are easily made, and while not too durable call for almost no

outlay. Another easily provided dressiug room furnishing is white glazed jars having covers with handles. They can be procured for about half a dollar; made to order as to height and diameter. The glazed surface makes them easily sterilized, and they can be replaced for about a sixth of the cost of the crystal cylinder jar. These jars may be readily sterilized by boiling for quarter of an hour in a common wash boiler. Enamel solution basins, pitchers, irrigators, and pus basins are within the reach of all of our institutions and are an absolute necessity. Boiling in the above mentioned wash boiler and being transfered from there by forceps to a sterile cotton bag in which they may be tied, is as effective as dry sterilization. Knives, scissors and needles can be prepared by the ordinary carbolic and alcohol procedure. The acid and alcohol can be preserved for repeated uses. Other chemicals may be used; Dr. Senn uses *cuolin;* Dr. Webster *cunosol.* We have thus far found the *carbolic acid* and alcohol method satisfactory.

Water tanks and sterilizer for dressings are a great convenience. Few of us can have steam sterilizers, but a very good Rochester sterilizer with 1⅓ cubic feet for dressings, with hot air and steam attachments, also two copper tanks holding twenty gallons, with faucets and gauges, can be landed here for about $60 gold. A blue flame oil stove with three burners makes a good stand for the water tanks and a clean desirable arrangement for the operating-room.

In suture material, silk and horse hair are both easily procured. Glass microscope slides, cut in two, make a convenient spool for the silk, which may be boiled in one per cent. soda solution ten minutes; boil in water ten minutes; keep in ninety-five per cent. alcohol. Horse hair: scrub with green soap, soak in cold water, rinse in several waters, soak in ether twenty-four hours, boil in sterile water twenty minutes, keep in ninety-five per cent. alcohol.

Prepared catgut is always an expensive item. In one hospital 180 tubes from Van Horn cost $37.50, while the same amount prepared locally cost $10.00. Another hospital reports a saving of $35.00 on 500 strands by local preparation. Many methods are in use, and I should be glad to hear suggestions for chromosized, iodized, or formalin preparations. Dr. Senn's formalin method is as follows: Roll the catgut, without any previous preparation, in a single layer upon glass rods. Tie the ends securely. Immerse in formalin five per cent for twenty-four hours. Wash by immersing in sterile water for twenty-four hours. Change every hour (running water is better). Boil from ten to eighteen minutes according to size. Preserve in alcohol ninety-five per cent., to which

has been added five per cent. *iodoform*, eighty-four per cent. *glycerine*. This solution can be made by using

Iodoform Emulsion	dr.	1½
to Alcohol	oz.	iv.

Chromosized Catgut is prepared as follows:—

Catgut	oz.	i.
Chromic Acid	grs.	iv.
Carbolic Acid, 95 per cent.	oz.	i.
Alcohol, 95 per cent.	oz.	xx.

Dissolve oil from catgut with ether, allow ether to evaporate. Dissolve *chromic acid* in dr. i. of sterile water, add to alcohol. Lastly add ninety-five per cent. *carbolic acid*, which gives the solution an amber color; add catgut without winding. Keep in solution from forty-eight hours to one week according to size. Keep jar tightly covered. Roll on glass rods a single layer. Tie ends securely and boil in ninety-five per cent. alcohol, three times, two days apart, boiling in all forty-five minutes, keep in ninety-five per cent. alcohol. The ordinary mason jar will answer instead of the Regulation metal boiler, if the precaution of filling the jar only two-thirds full and not screwing the cap down absolutely tight. There must be always enough alcohol to cover the catgut, one can count upon the evaporation of about one-third of the alcohol in boiling. Ends of catgut may be used over by boiling again in absolute alcohol.

The most important and costly of all surgical supplies is absorbent gauze. I believe in using a good grade of gauze, buying in bolts rather than rolls, as it cuts to better advantage. Miss MacDonald writing on the subject of "Economy in use of surgical supplies" in the *American Journal of Nursing* for July, 1906, says: "The most remarkable saving in the outlay for gauze has come from the washing and rinsing of gauze dressings. Many hospitals are beginning to do this. Many more have not made the attempt. Repeated bacteriological tests have proved the entire safety of using gauze that has been washed, and all hospitals that have tried it are proving its great economy. This practice has been in use to a greater or less degree in the Johns Hopkins Hospital for thirteen years. At first only the large pieces were washed in the ward by the nurses, but for the past eight years it has been sent to the laundry in ever-increasing quantities until it is now estimated that a little less than half of the monthly order of 17,000 yards is re-used.

In another hospital where this practice has recently been begun it is stated that they wash all of their gauze and find it perfectly satisfactory in every way, saving thereby $95.00 a month. Each of

these hospitals referred to averages about 200 operations a month and uses nearly two-thirds of the amount ordered in the operating-rooms. In striking contrast to this come two other of our large hospitals, averaging only from sixty to seventy operations a month and where no gauze is washed, and where the order amounts anywhere from ten to twenty-one thousand yards per month, with only about one-third of the number of patients treated. A simple method of washing gauze that could be employed in almost any institution, however small, is as follows: "The gauze is placed in a washer and soaked over night in cold water to remove the stains, then washed in warm water, riused and boiled one-half hour, rinsed again and the water thoroughly removed in the extractor and seut to the supply-room, where it is more easily stretched while damp." Abdominal sponges are laundried and rinsed. I find this practice in vogue with such eminent surgeons as the Mayo Brothers. For ordinary purposes we use in Wuhu cotton sponges covered with a layer of gauze; pads for dressing are made of absorbent cotton with a covering of gauze on both sides.

We are all acquainted with the expense of metal cases for the sterilization of supplies. In one hospital the writer knows $7.00 gold was paid for dressing can and $14.00 gold for apron cans. By repeated bacteriological tests it has been demonstrated that two thicknesses of factory cotton or one of heavier twilled cotton make a perfectly safe covering for sterile supplies; a certain coarse, close woven "lao pu" makes au inexpensive wrapping. This sterilizing each piece separately rather than in cans, also saves opening up more articles than are used.

The re-sterilization of all goods in supply closet twice a week insures safety. In hot weather goods cannot safely be left so long, but by boiling materials in Mason jars they may be kept dry and free from mold.

There seems to be a growing tendency in the United States to discontinue the use of medicated gauzes. "*Iodoform* gauze for drains is an expensive item, the bill in one hospital last year for the powder used in the general surgical operating room alone amounting to $360.00 gold. This did not include gauze used, or time necessary for its preparation. There are occasious when one feels the necessity of using *iodoform* gauze, which can be prepared by the following simple method:— Make gauze strips of the desired length and width and immerse in the following solution: One pint saturated solution of *boric acid;* to this add green soap to make a good suds, boil half an hour. After this, add to boiling solution one ounce of *iodoform* powder by measure; boil for ten minutes, exactly. When cold, add *carbolic acid*, 95 per cent., one

drachm. Stir solution often. Roll strips and keep in sterile jars. Castile soap is a good substitute for the green soap.

The pressure of work and lack of suitable helpers makes it impossible to give an elaborate preparation for operations. The example of such successful surgeons as the Mayo Brothers leads one to the belief that it is unnecessary. To support this argument allow me to refer to an article recently written by Miss Jammé of their hospital. "Has it been demonstrated that good results are compatible with economical technique? It has. In an important operating-room, where the chief efforts in the matter of technique are directed towards simplifying the methods and at the same time secure good results, 3,836 operations were performed last year; of these 2,157 were intraperitoneal, of which the total death rate was 2.1 per cent. Primary healing was generally obtained.

"In this operating-room the chances for infection are reduced by minimum requirements in the number of assistants at an operation; in the handling of instruments and dressings, in the amount of space through which instruments, dressings, basins, etc., are carried. There is no preparation of the skin until the anæsthetic is started on the operating-table, with the exception of shaving, which is done in the ward. The field of operation is thoroughly cleaned with soap and sterile water, using a piece of sterile gauze rinsed well with sterile water, after which follows a light sponging with Harrington's solution. (*For Formula see Dr. Venable's Article, page 7, January number,* CHINA MEDICAL JOURNAL.) Four sterile towels are then placed in position, surrounding the area of operation. This preparation takes about five minutes, and is done while anæsthesia is progressing, and the surgeon changing his sleeves and gloves. The dressing covering the wound in abdominal cases consists of a strip of gauze, a square of absorbent cotton, and one of common cotton, held in place with strips of adhesive plaster. Over this is adjusted a bandage made of gauze five yards long, folded the lengthwise of the gauze, for thicknesses. This is put on as a double spica of the groin and makes a most effective and comfortable bandage. When removed in the ward it is sent to the laundry and returned to the ward for further use."

To summarise: We find that notwithstanding the Chinese natural tendency to be dirty we are able to train assistants to be clean. We have also been able to get our assistants to dress in an economical and practical manner. Assistants who are under foreign supervision can be trained to be exact and develop a surgical conscience. I believe it is daily demonstrated in many hospitals in China that aseptic surgery is a possibility, despite exacting economy and immature scientific instinct.

I. CHRONIC INTUS-SUSCEPTION.

By JAMES. L. MAXWELL, M.D., Tainan, Formosa.

As three cases of this serious complaint have been admitted for treatment in the Tainan Hospital during the past few months and have formed, both as to diagnosis and treatment, a series of some considerable importance, I feel that their publication may be not without interest. With regard to the frequency of the disease it is very difficult to come to any certain conclusions; at home it is regarded as a complaint of very rare occurrence in adults, but I cannot help feeling that it is much more commonly met with out here, and reviewing past cases of serious abdominal disease, where on account of the critical condition of the patient or for other reasons no operative treatment has been undertaken, I am led to the belief that other cases have passed through our wards undiagnosed.

The history of the cases is as follows :—

1. Tsan Cheng, male, aged twenty-eight, was admitted to the hospital on the 6th June, 1906, stating that he was suffering from dysentery.

The patient was in a weak and emaciated condition and gave a most unsatisfactory history. He thought he had been ill rather more than two months, and stated that his illness began with pain in the abdomen and passage of blood and mucous. On examination the abdomen was hard and retracted, and tender all along the course of the ascending and transverse colon. The patient was certain that there had never been any vomiting. No lump could be felt, although repeated examinations were made. The stools consisted of blood and mucous and a small amount of fæcal matter. They were very frequent, and on microscopical examination contained amoebæ. Pain was at times severe and paroxysmal and was referred to the abdomen in general, but more particularly to the area of the hepatic flexure of the colon. A diagnosis of chronic dysentery was made and the usual treatment given, but the patient appeared steadily to get worse, so I resolved to perform the operation of appendicostomy and wash out the colon from above. The patient was placed under *chloroform* on July 3rd and a small incision made over the appendix, just large enough to admit two fingers. A prolonged search failed to discover the appendix, so the incision was extended upwards and the true nature of the case then, at last, became apparent. A large intus-susception was found lying principally below and covered up by the liver, and the greater part of this was totally irreducible.

The whole intus-susception was rapidly excised and end to end union made with a Murphy's button. The operation, however, proved too much for the patient in his seriously reduced coudition, and he succumbed to shock a few hours later.

2. Li Tang-tek, male, aged fifty-six, was admitted to the hospital on the 12th November, 1906, stating that he was suffering from dysentery. His history was that one month before he had been siezed with pain in the abdomen, which was followed by the passage of blood and mucous. He was unaware of anything which could have been the primary cause of the attack. He had never vomited. Pain was markedly paroxysmal over the hepatic flexure of the colon. The abdominal walls were thick and no tumour could be felt. The stools were very frequent and contained blood, mucous and a little fæcal matter. Remembering the former case, I made a provisional diagnosis of inter-susception, and seeing that after a few days the patient was making no progress with anti-dysenteric treatment I decided to operate.

On the 18th November patient was put under *chloroform* and laparotomy performed. A large intus-susception being found in the same position as in the earlier case.

The mass was drawn out of the abdomen and reduced slightly in size and a lateral anastomosis performed with a Murphy's button. The patient stood the operation fairly well and seemed for a time to be doing very well. The bowels were opened naturally on the 2nd day, but the patient failed to gain strength, and though complaining of uo abdominal pain gradually sank and died seventy-two hours after operation. Post mortem: On reopening the wound to recover the button no sign of peritonitis was found except for a little sticky lymph near the site of anastomosis. There was no leakage of intestinal contents, but a very small area of necrotic tissue was found at the under surface of the button. The edges of the abdominal incision showed little inclination to unite.

3. Kho Lau-tit, male, aged nineteen, was admitted to the hospital on March 9th, 1907, stating that he was suffering from dysentery. The history given was that on February 8th he quarrelled with another boy, who hit him in the stomach. For five days later he had no trouble, but then passed pure blood for three or four days; after that pain in the abdomen and dysenteric stools. There had been no vomiting.

On examination a large sausage-shaped tumour was discovered lying along the course of the transverse colon. There was no abdominal distension. Very severe paroxysmal pains were complained of at times over the area of the tumour. The stools consisted of mucous and blood and a little fæcal matter. As soon as the consent of his father could be

obtained the patient was operated upon. On March 16th, under *chloroform*, the abdomen was opened and the intus-susception reduced as far as possible, which was till a lump the size of a large orange was reached; further reduction being made impossible by adhesions. Lateral anastomosis by suture was then performed as described by Kocher in his work on operative surgery. I quote the description as given in that work :—

"The two pieces of gut are placed with their ante-mesenteric aspects in opposition. They are emptied by pressing the contents along the bowel and by compression above and below by applying two pairs of clamps. A longitudinal continuous serous suture is then put in along the convexities of both pieces of gut for two inches, and the ends of the sature are left long, with a needle threaded on one of them. A longitudinal incision is now made in each piece of gut a quarter inch from the sutures for a distance of not quite two inches and a continuous suture is put in through all the coats. This brings the two openings into opposition. Lastly, the other half of the serous suture is introduced. A safe communication is thus rapidly established."

As a further safeguard I added an omental graft to my union.

The patient, who was in a very poor condition, suffered very little from shock, and was completely freed from abdominal pain at once, and convalescence was as rapid as it possibly could be. No drugs were administered. The feeding was as follows: 1st day, hot water only; 2nd day, albumen water by the mouth; 3rd, 4th, 5th days, milk; afterwards gradually returning to ordinary food. Bowels were opened on the 5th day by enema, and after that were moved daily without assistance. Patient was allowed up on the 15th day and returned to his home on the 23rd day after operation.

It is difficult to know what the mortality of these operations at home is, but according to the text-books to my hand all forms of operation for irreducible intus-susception are attended with a very high death rate. This is not surprising when the very weak state of the patients who have allowed the disease to reach a chronic condition is remembered.

Looking back at the cases there are evidently two points of great importance: first the diagnosis and secondly the mode of operative treatment.

With regard to diagnosis, to any like myself who have seen the disease previously only in young children, the diagnosis holds many points of difficulty. Just to note these which of course are only negative points to a preconceived opinion; they are :—

The absence of vomiting in all three cases.

The absence of any signs of intestinal obstruction in all three cases.

The absence of palpable tumour in the first two of the cases, and this was particularly striking in the first case of all, where the patient was thin and emaciated with a retracted abdomen.

From what I have observed in these cases I shall, until future experience proves it false, lay the greatest stress on the conjunction of dysenteric symptoms with a paroxysmal pain in the line of the colon, especially over the hepatic flexure. In all these cases this was most marked, and it was the pain that made the patients not only ready but anxious for operative measures. The pain was quite distinct from any ordinary colic, and I have never seen anything just like it in dysentery, though dysenteric pains are often very severe. Further as my first case showed, one must be on the lookout not to be deceived in diagnosis by the mere presence of amoebæ in the stools.

With regard to operative measures, I have now no hesitation in utterly condemning the operation practiced on my first case. While it is more satisfactory to feel that one has removed all diseased tissue, yet there must be few patients who, after suffering for a month or more from intus-susception, could still survive an extensive resection of the bowel.

With regard to the form of lateral anastomosis there is probably really little to choose. Personally I dislike the mechanical contrivances, but the death of the second patient I attribute almost wholly to his advanced years ; had he been a few years younger he probably would have done all right.

The operation described on the third case proved so easy in performance and so successful in result that I shall myself certainly employ it in any future case I have to deal with. The operation was made a little more difficult than it otherwise would have been by the shortness, congenital or inflammatory, of the transverse meso-colon.

II. TRUE HYPERTROPHY OF BREASTS.

A photograph showing a very good example of this very rare condition is to be found in this number of the JOURNAL. Before giving the few notes I have of the case I would append a few general remarks on this disease. I have not previously had the good fortune to meet with a case, and these notes are taken mostly from Green's Encyclopedia Medica.

The disease is said to be more common in tropical than in temperate climates. In true hypertrophy both breasts are almost invariably affected, either simultaneously or the one shortly after the other.

As to causation, all that can be said is that puberty and pregnancy generally initiate the enlargement, which is greatly in excess of, as well as more progressive than, the evolution which normally occurs at these periods. In a few instances breasts have become abnormally enlarged during pregnancy, have subsequently diminished in size, to become still further hypertrophic at the next pregnancy. Occasionally the hypertrophy does not make its appearance till the fortieth year and may be unconnected with pregnancy; in these cases the enlargement is less rapid and soon comes to a standstill.

In the cases which develop during pregnancy the parenchyma takes an active part in the overgrowth, and the breast on section is seen to be made up of a collection of more or less well circumscribed, lobular, fibro-parenchymatous masses embedded in a loose perilobular stroma. The skin is usually normal and non-adherent. The nipple is often effaced and the areola greatly expanded. Pain is seldom complained of, but the patient is greatly inconvenienced by the size and weight of the organ. It has been stated that hypertrophied breasts do not secrete milk; on the other hand, cases are recorded in which an excessive secretion of normal milk has been observed in breasts which have became hypertrophied during pregnancy.

In many cases, fortunately, growth is spontaneously arrested. In cases which are both acute and progressive the breasts may reach a weight of from 10 to 20 lbs., or even more.

In consequence of the low vitality of the tissue, very slight injury suffices to set up ulceration, followed by gangrene and death from blood-poisoning. The only really satisfactory treatment for this condition is amputation of the affected organ. Patient should be placed for two or three days in the recumbent position, applying pressure and elevation to empty the breast of blood.

Hæmorrhage may be reduced to a minimum by applying a rubber tourniquet to the base of the organ on the proximal side of two skewers passed through the base. The second breast may be removed as soon as the patient has sufficiently recovered from the first operation.

The patient, a Chinese woman aged twenty-four, was admitted to the Tainan Hospital on July 12th, 1907. She was very strong and healthy in appearance, and had never met with any serious illness. Catameuia had commenced about the usual time aud had been regular up to February of this year.

Patient had been married about two years. Catamenia ceased in February, and about the same time the enlargement of the breasts began. Patient was not aware she was pregnant, believing that the cessation of

the menses was due to the enlargement of the breasts. She complained of no pain whatever, but very much of the discomfort caused by the weight of the organs and of the notice which the peculiar shape of her figure attracted; this was still more emphasized by the fact that she was short in stature.

On examination the patient proved to be about five months' pregnant. The eularged breasts, reached, when standing, to just below the umbilicus. The areola was greatly expanded and the nipples almost effaced. The skin of the breasts was perfectly healthy and pliant, and there was no trace of thickening such as accompanies elephantiasis.

The case may therefore be described as a typical example of acute hypertrophy of the breasts as described in the foregoing notes.

With regard to treatment I advised amputation of the breasts, and to this she readily consented at first. Later when told she was pregnaut she decided to wait till her pregnancy was over, in the hope of still being able to rear her infant, though it is difficult to imagine how an infant could be suckled at such breasts.

Of course it was impossible to accurately determine the weight of the affected organs, but to the hand they felt as if each would weigh about 15 or 20 lbs.

NECROSIS OF THE FEMUR.*

W. E. PLUMMER, M.D., Wenchow.

When Dr. Davenport first asked me to read this paper I hesitated, because as will be seen later on, my experience of necrosis in this bone has been very limited, and the cases in which I have operated have derived but little benefit, so that I should have preferred to listen to a surgeon, who from successful treatment of these patients, could tell us when and how to operate. I explained these facts to Dr. Davenport, and also that my small library would not help me to do much more than place the difficulties before you; notwithstanding, he still desired me to undertake this subject, so I have prepared this paper in the hope that the study and discussion will make the treatment of these chronic cases easier in the future.

Necrosis in bone can be compared to gaugrene in soft tissues, while caries is a molecular death resembling ulceration. The patholog-

* Conference paper, 1907.

ical processes which lead to necrosis are similar to those which occur during inflammation elsewhere. Thus as in the skin and muscles, inflammation may be slight, so that the part perfectly recovers its structure and function, or when more severe goes on to suppuration, which destroys the parts, and when healing takes place leaves a permanent scar, or, when started by a very toxic substance, local death ensues; so in bone these different degrees of inflammation are seen, and any one of them may lead to necrosis.

In the severe forms death may take place, as in gangrene, from the severity of the infection; where the poison is slighter, pus may be formed at one spot, and if it could escape, the result would not be so serious; but being confined by the bone and periosteum, it forces its way up the medullary canal or beneath the periosteum, and thus by cutting off the blood supply, enables the micrococci the more easily to do their work of destruction.

Necrosis may also result from the sclerosis in bone which follows acute inflammation, but more commonly osteosclerosis follows an inflammation which has been chronic from the beginning; the chronic inflammation leading as in other tissues to fibrosis, in bone to hyperostosis and sclerosis which obliterates the haversian canals and produces death of the enclosed osseous structures by cutting off the blood supply.

The necrosed piece of bone, if on the external surface and small, may escape by one of the fistulous tracts and healing ensue; but in central necrosis the surgeon's help is commonly needed, as the sequestrum is surrounded by new bone in which there are generally openings called cloacæ for the pus to escape.

Necrosis is almost always caused by micro-organisms, although the part may be predisposed to disease by injury. Many germs have the power of giving rise to inflammation which may end in necrosis, but by far the most common agent is the staphylococcus aureus. This coccus gives rise to the disease commonly known as acute necrosis, and it also is the cause of some of the more chronic forms of inflammation, some of which are, and some of which are not, accompanied by the formation of pus. When inflammation has led to the formation of a large sequestrum the trouble is almost always started by the staphylococcus aureus. Scarlet fever and typhoid fever may be followed by necrosis, but then as a rule the dead bone is of small size; this small piece of necrosed bone may, however, give rise to a large inflammatory growth around it, which may be mistaken for more serious conditions. Tubercle most often causes molecular death, but sometimes small fragments of bone are found in a chronic abscess cavity. Syphilis causes periostitis which may lead to

superficial uecrosis as will also a superficial gumma. Gummata, more deeply placed, may cause considerable osteoplastic growth around, which, owing to pressure on the blood vessels, leads to necrosis as already described.

All these diseases, with the exception of syphilis, are most potent for evil before the skeleton has reached maturity; the junction of the shaft with the epiphyses being especially vulnerable. This explains why the lower eud of the femur and the upper end of the tibia (epiphyses which are late in uniting and much exposed to injury) are so liable to be diseased.

We are all familiar with the text-book description of the course of acute necrosis, but I think one is apt to overlook the importance of the more chronic causes of necrosis, and therefore it may be worth while to read the following account of cases recorded in Erichsen's Surgery :—

A girl, aged fourteen, complained of persistent pain in the buttock after an attack of rheumatic fever; a hard brawny swelling gradually formed during the following year. It was aspirated, but nothing was found, and fears were entertained that it might he a sarcoma. Some weeks after, a few drops of pus escaped from the puncture, and on dilating the opening, a small sequestrum, about the size of a thumb-nail, was detached from the side of the pelvis.

A man, aged thirty-five, complained of a slowly growing tumour, about two and a half inches in diameter, under the right nipple, that had appeared some months after typhoid fever. He was sent into University College Hospital as a case of scirrhus of the male breast. There was one enlarged glaud in the axilla, and there seemed no doubt about the diagnosis, but to avoid any possibility of error, a deep iucision was made into the growth, which grated under the knife and felt and looked like scirrhus. It was accordingly removed, when a small cavity half an inch in diameter was found heneath, containing some caseating granulation tissue; the finger passed from this through the pectoralis major to a small sequestrum on the fifth rib.

Necrosis occurring in the femur follows the same pathological process as when dead bone is formed in other osseous tissue, but in the femur the process is of especial interest and importance on account of the anatomy of the part. The upper end of the bone is frequently attacked by tubercle and the treatment is dealt with in the text-books under the headiug of hip joint disease. The greater part of the shaft of the femur is very deeply placed and surrounded by muscles. On the inner aspect are important vessels and nerves, so that the bone may be best reached by an incision on the outer side between the ilio-tibial band and the biceps.

The lower end of the bone is the part most liable to be affected by the condition we are considering, according to Mr. Edmund Owen 50 per cent. of the cases of acute infective inflammation of the skeleton being in this position; so that the anatomy of this region needs to be carefully considered with a view to operative treatment. In front is a pouch in connection with the knee joint which must not be opened, and as its limits vary, no rule can be laid down as to where it would be safe to incise; in addition the tendon of the quadriceps extensor would be somewhat in the way. Internally the bone is deeply placed and covered with thick layers of muscle. Posteriorly is an almost impassable barrier of arteries, veins and nerves.

On the outer side in front is the ilio-tibial band with the tendon of the biceps behind, and it is between these two, as will be again mentioned, that any attack on the bone in this region must be made.

When necrosis occurs in the tibia, ulna or the upper end of the humerus, the sequestrum has, in my experience, usually been easy to remove, because the dead loose bone has been felt through one of the cloacæ, and it has only been necessary to enlarge the opening and draw out the offending piece of bone. The superficial situation of these bones and the absence of important structures which might be injured, also helps to render the operation less difficult than in the femur.

I have seen many cases of chronic disease in the femur with enlargement of the lower end and sinuses of many years' duration, but generally dead bone has not been felt. The following are brief accounts of three of these cases:—

Case I. The patient was a man aged 31.

History.—The trouble began ten years before admission. The left thigh had two sinuses which commenced shortly after the disease began; they have discharged pus ever since. The day before admission the knee joint swelled, became painful, and much straw-coloured fluid came away by the inner sinus.

Condition on admission.—The lower half of the left thigh and knee joint was swollen, the circumference was five inches more at the greatest diameter than at the corresponding point on the sound side. There were two sinuses: one on the inner aspect about three inches above the head of the tibia, and one on the outer side of the leg about four inches higher. The skin over the articulation was hot, and a fluctuating swelling corresponded to the anatomical position of the synovial membrane; movement of the joint was painful. A probe could be passed in at one sinus and out at the other, passing just behind the femur, which was much enlarged. The patient has been accustomed to use a stick in this way every day. At a depth of one and a half inches from the inner opening loose bone could be felt, and by this opening

light straw-coloured fluid was constantly escaping; the flow could be increased by pressing on the front of the joint. After three days' rest the discharge ceased, the swelling and pain of the joint subsided.

This was an undoubted case of necrosis, as the loose bone could be felt with a probe; it was also interesting as showing how these cases often lead to a collection of fluid in the joint, which fluid is said to be sterile. The position of the sequestrum in the popliteal space is the site in which necrosis is said most frequently to occur.

CASE II. The patient was a male 22 years of age.

History.—Five years ago the thigh swelled and then burst, leaving sinuses which have discharged ever since.

Condition on admission.—The patient was sallow, but well developed. The femur was enlarged at the lower end and there were sinusus on the inner and outer side within five inches of the upper end of the tibia. The knee joint could not be flexed beyond an angle of 145° There was not much pain on walking, but the leg felt weak and prevented the patient from doing heavy work. No loose or bare bone was to be felt.

Treatment.—The patient was very anxious to have an operation, and so I somewhat reluctantly undertook to do what I could. At that time I had not seen Mr. Owen's paper, to which reference will presently be made, and as no directions could be found in the text-books, the incision was made on the outer side of the thigh in front of the ilio-tibial band over the lower third of the bone. The aponeurosis was split, the outer surface of the bone bared, and then a cavity made into the centre of the expanded femur with a mallet and chisel. A small quantity of necrosed rarefied cancellous tissue was removed from a cavity that would about correspond to the junction of the shaft with the epiphysis, and it was noticed that there was an opening into the popliteal space. The medullary canal of the shaft was not encountered. After the operation a little pus was found at each dressing for the first few days, but a fortnight later the suppuration increased, and for the rest of the month there was considerable discharge accompanied by pain higher up the thigh. This gradually subsided, and at the end of six weeks the patient went home with an unhealed sinus, apparently unbenefitted by his stay in the hospital.

The incision made in this case involved separating the aponeurosis, dividing some bulky muscle and cutting through a layer of thick hard bone. After removing sequestra from more superficial bones I have not had any trouble from suppuration, probably because the whole of the diseased area can be dealt with and the cavity well packed at each dressing. In this case the cavity in the bone was at the bottom of a deep sinus-like hole which was difficult to pack, and as the old sinuses ran among important vessels that had not been scraped. The discharge and pain seemed to point to infection of the periosteum or medulla

higher up; happily the constitutional symptoms were slight, but evidently special care needs to be taken to avoid the entrance of micro-organisms at the time of operation and afterwards.

CASE III. Male, aged 30.

History.—The trouble began two years ago with pain and swelling in the left thigh. After being in bed one month the swelling broke and discharged much matter.

Condition on admission.—There were two sinuses: one on the inner side about three inches above the upper end of the tibia; the sinus on the outer side was situated in the middle of the thigh. The patient said that the knee joint occasionally swelled, but at the time of examination it was normal. The lower end of the femur was enlarged and the knee could not be flexed beyond a right angle. There was no bare or loose bone to be felt. The patient could walk with but very little pain, but was unable to carry any weight on his shoulder.

Operation.—As almost all the discharge came away by the outer sinus, the incision was made over the middle third of the femur on the outer aspect. A small node of necrosed bone was found at the bottom of the sinus, but no cloacæ were discovered, so hoping that this small fragment of dead bone might be the cause of trouble, nothing more was done. Since the operation the sinuses have continued to discharge as freely as before and after an interval of two months the patient is in practically in the same condition as when he came in.

In this case it would perhaps have been wiser to have at once explored the popliteal space, as the occasional swelling of the knee joint which the patient said often occurred, would suggest that the trouble was situated in the lower end of the femur.

When writing to the JOURNAL last year asking for information on this subject, I quoted from a paper by Mr. Edmund Owen, but overlooked the fact that in another part of that paper he partly answered one of my questions, namely, where is the best site to attack the bone when an attempt is made to find a sequestrum? As this part of the subject is important I will quote his own words: Describing the operation that is to be undertaken when this spot is the site of acute necrosis he says:—

"There is one spot where one can easily reach the lower end of the femoral diaphysis, and that is on the outer side, in the furrow between the ilio-tibial band and the tendon of the biceps. Working deeply in that situation the surgeon may discover a tense subperiosteal abscess which communicates with the interior of the bone by a small aperture. Then he opens up the medullary cavity of the femur, enlarging his incision and cutting away the shell of compact bone . . . but if cutting upon the bone the surgeon find no abscess he must not close the wound and reproach himself with having made a mistake, but he is to continue his exploration by searching with a director around the femur, exploring

even in the region of the popliteal artery, where under the periosteum of tbe triangular piece of hone above the condyles, pus is very apt to lurk. Still baving found no pus he is to drill a hole into the lower end of the diaphysis, and, as it were, to make it his business to find some pus; a grooved director must be thrust into the various bore holes so that if pus is present it may easily flow out, having found it he must open up the bone freely as already described."

This is a description of an operation undertaken for acute necrosis, but it seems to me tbat it would be as valuable when hunting for a sequestrum iu this region. If cloacæ are found in the popliteal space then through them the hone can be examined with the finger or probe, and if dead hone is discovered it can be removed in the usual way. If no cloacæ are found then holes can be bored, through which a probe can search for loose hone in the interior.

In cases such as have been related where there is enlargement of the lower end of the femur with sinuses of several years' duration by which, however, oue is unable to feel bare or loose bone, I think there is generally a sequestrum causing the trouble, and that the sinuses will not heal until it is removed; hut the following case suggests that when the inflammation is accompanied by much osteoplastic growtb, the dead bone, if present, may be very difficult to find.

A young man, aged 28, nine years since had a swelling over the upper end of the left bumerus which after ten days broke and discharged much pus. On two occasions dead bone has come away; the last piece baviug separated over five years ago.

On admission a sinus was found on the outer side of the arm at the junction of the upper and middle thirds. The sinus led down to bare but not loose bone. The humerus above was much enlarged and the movements of the shoulder joint were limited, so that the arm could not be raised above this articulation. It was thought that by opening the sinus it might be possible to discover cloacæ and dead bone, but at the operation no cloacæ could be found; the bone was bare over a cousiderable area.

An attempt was made to reach the medullary canal with a chisel and mallet, but the bone was of almost ivory hardness aud uo cavity could be found.

Since preparing the foregoing remarks, another patient has been under treatment, and an endeavour has been made to carry out the operation as just suggested. The following are notes of this case:—

CASE IV. The patient was a male aged 27 years.

History.—Three years since the right thigh swelled, and after a month was opened by a Chiuese doctor. Blood and pus came away aud tbe sinuses have continued discharging ever since.

Condition on admission.—There was a sinus on the inner side of the thigh about three inches above the upper end of the tibia. On the outer side in the middle third of thigh were scars where sinuses existed for a short time after the swelling had been opened; they have been healed for nearly three years.

The lower end of the femur was enlarged; a probe passed in by the sinus to a depth of four inches, but bare or loose bone could not be felt. The leg could be flexed a little beyond a right angle.

Operation.—An incision was made between the ilio-tibial band and the biceps in the lower third of the thigh. The bone in the popliteal space was found to be rough and bare and a scale of dead bone about an inch square was removed from this surface of the femur. The sinus on the inner side by which as already stated a probe could be passed four inches, was found to lead to this rough surface in the popliteal space.

The incision which was used on this occasion enabled the popliteal space to be exposed with ease, but it is yet too early to say whether the patient will be benefitted by the operation.

The following analysis of the four cases reported shows that

1. The ages at which the disease commenced were 17, 21, 24, and 28 years.

2. The duration of the disease had been 2, 3, 5, and 10 years respectively.

3. In each case there was disablement from work, enlargement of the lower end of the femur, sinuses and more or less limitation of movement of the knee joint.

4. In two of these cases the knee joint was occasionally swollen.

5. In only one case could bare or loose bone be felt before the operation, but in each case dead bone was present.

I regret that lack of literature has made it impossible for me to give you accounts of cases recorded by the masters of our art in the home countries, but hope that some present will fill in the gaps in these remarks.

NOTE:—We would call the attention of those interested in the progress of tropical medicine to the yearly volumes of papers published by the American Society of Tropical Medicine. The address of the secretary is Dr. JOHN M. SWAN, Secretary, 3713 Walnut Street, Philadelphia, Pa., and we presume that these papers may be procured through him.

A RECURRENT THYRO-GLOSSAL DERMOID.

By Rev. W. ARTHUR TATCHELL, M.R.C.S., L.R.C.P., Tayeh, Hupeh.

In November, 1905, a young native scholar, aged twenty-two, of Nanking, was shown at a clinical meeting of the C. C. M. M. A.

His father gave the following history. Seven years since, a small swelling was noticed underneath and behind his tongue. As the swelling gradually increased, his speech became less and less distinct. The eating of solids also became increasingly difficult. After six years' growth, i.e., in 1904, it was such a large size that the poor fellow could neither eat or speak. He was taken to a hospital in Nanking, where the swelling was removed.

His present condition was the result of twelve months' growth.

The concensus of opinion of the clinic, was that it was a ranula. With this diagnosis he was sent to us at the Wesleyan Mission Hospital, Hankow.

Being absent from the clinic we did not see the youth until the following day.

We then found a moderately tense, fluctuating swelling occupying the whole floor of the mouth. It was quite median in position. The tongue was pushed up, touching the hard palate. This was the result of the swelling protruding forward and upwards. The genio-hyoid muscle had prevented the swelling bulging into the neck between the mandible and hyoid bone. (See sketch.) This is unusual.

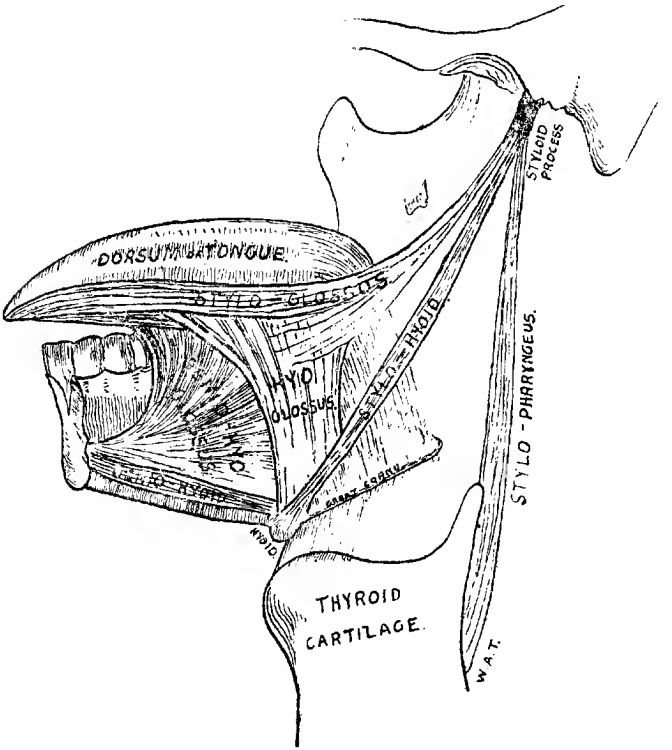
The exposed and protruding portion was covered with shiny mucous membrane. This was not adherent to the swelling beneath. The whole swelling could be moved slightly from side to side.

If pushed backwards the patient ceased to breathe. Examination revealed the absence of both pain or tenderness. It moved slightly with deglutition. He could neither speak or eat solids. Liquids could only be introduced at the side of his tongue.

Two days after admission we operated. *Chloroform* was administered. A ligature was passed through his tongue and held forwards and upwards by an assistant.

A transverse incision, of about one inch, was made through the mucous membrane. This was freed as far as possible from the swelling and held back with retractors. An incision was then made through the thick wall of the swelling. Immediately a thick, cheesy rather offensive substance exuded. The remainder was either pressed or

scooped out. With comparative ease we detached with our fingers the outer wall of the swelling from the mucous membrane and muscles. But it was firmly fixed to the hyoid bone. From this, we cautiously snipped it away with curved scissors. Slight hæmorrhage was controlled with pressure. It was taken away entire and was about the size and shape of a hen's egg.



The cavity was packed with dry sterilised gauze; the end of the gauze being brought out at the angle of the mouth and fastened to the side of the face with adhesive plaster.

It is interesting to note that this method is condemned by most text-books, to which we have since referred!

For several days he had nasal feeding. We changed the gauze every day, washing out the cavity with a weak solution of *carbolic.*

He then had the joy of having solid food, to which he did full justice. After each meal he washed out his own mouth and also frequently between meals. The gauze was left out after about seven days. He left the hospital fifteen days after the operation. The cavity had almost completely closed, and his speech was normal and distinct.

We were unable to cut sections. By microscopic examination the wall of the cyst was thick and hard. Its interior surface was corrugated, presented the appearance and also felt like rough skin. From the internal surface we discovered numerous hairs growing.

By a microscopic examination of the contents we found fat cells, flattened epethelial cells, hair and débris.

The cyst emerged from between the genio-hyoglossus muscles and about the genio-hyoid. (See sketch.)

This is a fairly typical case of thyro-glossal dermoid. They often lie latent until puberty, and then, for some unexplained reason, they rapidly increase in size.

The report has purposely been held in abeyance, as the youth promised to immediately return if he noticed the slightest suspicion of a recurrence.

As it is eighteen months since he left the hospital, we do not think it premature in now publishing the case. Of course he may have gone elsewhere.

SERMON PREACHED BEFORE THE CHINA MEDICAL MISSIONARY ASSOCIATION.

Shanghai, Sunday Evening, 21st April, 1907.

By ARNOLD FOSTER, L. M. S., Wuchang.

Text St. John v. 36 and xiv. 12.

The works which the Father hath given Me to accomplish, the very works that I do, bear witness of Me that the Father hath sent Me.

Verily, verily I say unto you, He that believeth on Me the works that I do shall he do also; and greater works than these shall he do, because I go unto the Father.

In the second book of Chronicles we have an account of the spiritual deterioration which characterized the closing years of one of the greatest and best of the kings of Judah, King Asa, the great-grandson

of Solomon. Three instances of this deterioration are recorded, and the last is this that having a serious disease in his feet "he sought not to the LORD, but to physicians."

From this passage we see that in early times, as in the present day, there were people who set the Lord and the physicians in opposition the one to the other, as if "to see the Lord" sincerely in time of sickness required that we should keep clear of physicians, and as if, on the other hand, having recourse to physicians implied distrust of God. This kind of opposition has generally been due to either or other of two causes: 1st latent atheism, which habitually and in all things relies on and magnifies second causes, and, without openly denying God, simply ignores Him. This was the sin of King Asa, and it is the sin of thousands of people to-day.

But 2ndly, there is a kind of dualism that has always had a great fascination for a certain class of thinkers, and has been not uncommon among Christians, a habit of mind that regards all material things as being more or less unspiritual and non-religious, and finds it easier to see God's hand in extraordinary events, such as miracles, wonders and suddeu unlooked for combinations of events, than in the daily aud hourly interest that God takes in all the works that He has made and sustains, and the laws, as we call them, by which all regions of His dominion are regulated. Against that whole theory of the universe, the Christianity of the Bible is, I venture to think, a protest. But to-night we are to consider a religious phenomenon which is at the very antipodes of King Asa's apostasy. There is being held in Shanghai at this time a conference of physicians and surgeons, drawn from different lands and representing various churches, who are banded together for the express purpose of bringing their patients and all whom they can influence through their work of healing, to know the Lord, to trust in the Lord, and to give thanks to Him for any experience of healing and of cure that they may receive at his servants' hands. Of this conference, aud of the Medical Missionary Associatiou it represents, the motto might well be "Not unto us, O Lord, not unto us, but unto Thy name give glory for Thy mercy and for Thy truth's sake." Throughout all the world Christian medical men are working with the same aim, seeking to use the results of scientific research and of medical or surgical knowledge and skill, not only for the purposes of healing, but also for the purpose of showing in this very way how God loves and cares for suffering meu and how the universe He has created is full of healing euergy which is to be liberated and made available for man's needs by the efforts of man.

Our China Medical Association has just issued some statistics with a view to showing the present extent of its work, and from these statistics I give a few figures in round numbers, but with the remark (1) that they are incomplete and (2) that they are certainly inadequate. They are incomplete, for out of 166 hospitals and 241 dispensaries only about half have sent in their returns. They are inadequate, for some of the finest results of the work done by our medical missionaries can by no possibility be tabulated. I speak from what I have myself seen during a long life in China of the moral and religious impression made on patients by the Christ-like tenderness, kindness and sympathy shown in our mission hospitals. Even those who could not be cured of their diseases have, in numberless instances, carried away with them an abiding memory of the love and gentleness with which the doctor who spoke to them of the love of Christ had, himself or herself, sought to alleviate their pain and to console them in trouble.

Such as the statistics are, I quote from them the following approximate figures: Expenditure for the year, $245,000, of which $206,000 were raised locally by subscriptions or fees.

Total number of cases treated	...	...	913,000.
,, ,, ,, in-patients ...	...	...	34,000.
,, ,, ,, out-patients	...	...	889,000.

In the hospitals from which these statistics come, there are 4,500 beds and 560 Chinese students and helpers.

My subject to-night is Medical Missions as a carrying on of the work of the Incarnation. Our Lord claimed that the works that He did were in themselves a witness that the Father had sent Him. When He was about to leave the world He gave His disciples the assurance that their works also would have a similar value.

The Gospel of Christ did not consist merely in the lessons He taught by word of mouth, in His preaching, His parables, His conversations. The works He did, not less than the words He spoke, constituted the Gospel of the Kingdom of Heaven, and our method of proclaiming the Gospel is to be like His in this respect. There is an expression often met with in missionary literature, and I am sorry to say I have heard it even on the lips of medical missionaries to the effect that "Medical Missions are a handmaid of the Gospel." This is neither the language of Scripture, nor does it express the thought of Scripture. Look at our Lord's words in His sermon at Nazareth as He began His ministry. (St. Luke iv. 18.) It is a Gospel of action as well as of preaching that He proclaims, "The Spirit of the Lord is upon Me because He appointed Me to preach good tidings to the poor; He hath

sent Me to proclaim release to the captives, and recovering of sight to the blind." Here is a conception that is all inclusive; it is complete in in itself; it needs no 'handmaids' or supplementary organizations to make good its deficiencies, to enlarge its scope, or to improve its ideals. A Gospel that only consists in preaching, is an incomplete and imperfect Gospel. It is at best only a fragment of the Gospel of Christ. Look again at St. Matt. 8. See how the sermon to the disciples on the Mount is closely linked with works of compassion wrought for the poor, suffering, ordinary people on the plain. As He came down from the Mount a leper met Him asking to be made clean. The Lord not only heals him by an act of divine power, but He does it in a way that at the same time bears witness to the Father as the God of love. He stretched forth His hand and not only 'touched' the leper, as our English version has it, but took hold of him. We know from our own experience what it has sometimes been in times of trouble when some friend has lovingly taken hold of our arm or our hand as he spoke his words of sympathy with us. Think of the poor leper with his loathsome disease upon him and surrounded by a fence of Jewish ceremonialism which made even his friends keep him at a distance. Before the whole multitude the prophet of Nazareth did what not one of them would have done, and did it with a divine grace that must have recalled to some minds at least the opening words of the 103rd Psalm and other passages in the Old Testament that refer to the loving kindness of Jehovah. Thus does our Lord lift the whole transaction to a higher region than that of mere miracle and makes His works a witness to the Father that sent Him.*

Once again, notice the account of our Lord's ministry, given by St. Peter to the gentile enquirer Cornelius. (Acts x. 34-43.) In the very centre of this passage we find emphasis laid on the fact that the preaching of tidings of peace by the Lord Jesus was accompanied by a corresponding practical energy of compassionate action which in itself clearly revealed the hand of God. "Anointed with the Holy Ghost and with power" He "went about doing good, and healing all that were oppressed by the devil, for God was with him."

Let us now consider the works of Christ in their relation to those of His followers. It is a common mistake to regard these two as distinct. The Scriptures constantly represent the second simply as the carrying on of the first under new conditions. In Acts i. 1, St. Luke describes his earlier book, i.e., the Gospel which bears his name, as having to do with

* On the healing of this leper, see an address by Bishop Westcott, 'The Power of Ministry.' *Christian Aspects of Life*, pp. 353-365.

"all that Jesus *began* to do and to teach" until the day in which He was received up. In one sense, of course, our Lord's work on earth was complete in itself. In another sense it was not. He had left nothing undone which He set out to do, but He *began* in one way what it was a part of His purpose to perpetuate and complete in another. As His ministry on earth drew to a close, He said: "The hour is come that the Son of Man should be glorified," but with that glorification His work of saving the world would not come to an end; it would thenceforth be carried on under new and more wonderful conditions. "Verily, verily I say unto you," He added, "except a grain of wheat fall into the ground and die it abideth by itself alone; but if it die it beareth much fruit." Christ glorified, though withdrawn from human sight, would still work amidst the old familiar scenes of His earthly miuistry, but more than that, He would work also simultaneously throughout the larger sphere of the whole world. This wider ministry, however, would be through the agency of His disciples and in virtue of a new and life-giving relationship in which He would henceforth stand to them. It is to this vaster work that He refers when He says: "Verily, verily, I say unto you, he that believeth on Me, the work that *I* do shall he do also; and greater works than these shall he do because *I* go unto the Father." The Greek of this passage shows that the word I twice repeated is emphatic—the work that *I* am now doing, the man that believes on Me shall do also, and greater works also, because *I* am about to enter on a new world of glory and of power at the right hand of the Father—that right hand which is everywhere and which everywhere represents the might and majesty of God. Other words of Christ are to the same effect. Do we not as Christians habitually underestimate the power at our disposal and the dignity of our ministry and discipleship? Apart from Christ, it is true, we can do nothing; we are nothing, and have no ground for thinking anything of ourselves but thoughts of shame and of humiliation. But "if any one be in Christ there is a new creation; the old things are passed away; behold they are become new." "We are God's workmanship created in Christ Jesus for good works which God afore prepared that we should walk in them." *

What is then the character of the works that through believing in Christ we can do, which will some of them be even greater than the ones that He Himself did when on earth? We have seen already that while some of our Lord's works were what we call miraculous, others were not so. The word St. John delights to use for all these actions is 'signs,' and

* Cp. Bp. Westcott. *Christian Aspects of Life*, pp. 21-35; *Commentary on Ep. to Ephesians*, p. lxv. and notes on Eph. ii. 10.

their chief characteristic is always the same, not bald almightiness, but the manifestation of the Father's power working along lines of the Father's love always for a moral end. This is the 'sign' of God's works, an end worthy of God. And it is this end that constitutes their real greatness, for the glory of God is ever the glory of His moral perfection and not that of mere overwhelming might. Hence it is that our Lord represents the perfection of God our Father as being imitable by man (St. Matt. v. 44-46). We cannot indeed imitate God either in making the sun to rise or the rain to fall; but even as He, in the region of His infinity, gives His blessings of sunshine and rain to His enemies as well as to His obedient children, so we, in the narrow region of our finiteness may, according to the means at our disposal, extend to our enemies and to those who displease us, as well as to our friends and those who are kind to us, a love which is like God's in the spirit of it, for it is *this* in which its true Godlikeness consists.

Our doing the same works which Christ did, has reference to the motive and intention of them even more than to the wonder of them; and yet if we consider the matter in all its bearings, we cannot but see that some of the works which Christ has wrought *through His people*, since He ascended on high, are really even more wonderful in themselves, and have reached a far greater number of sufferers than those works which He Himself wrought in the days of His flesh and before He went to the Father.

Look at some of His works, both miraculous and also non-miraculous, and think of the narrow limits within which after all they were immediately operative, but then think of what they led to, and were intended to lead to by Him who all along had before His eyes the completion of His work in glory, as well as the initiation of his work amidst the earth. Our Lord healed individual lepers, individual cripples, individual blind men and the like. But how far after all did this relief extend? He bade individual sinners go and sin no more. He attracted them to Himself by a mighty spiritual attraction in such a way that these particular people seem to have had the awful tyranny of immoral associations and immoral connexions suddenly snapped, with the result that they were at once socially and mentally free to follow Him. But how far is this sort of influence and this sort of remedy immediately applicable to all cases of the kind? I myself see no signs in the Scripture that our Lord intended permanently to endow His followers with a plan for dispensing through faith with the use of medical and surgical treatment, or with a plan for curing incurables. The lesson His miracles teach us is surely this—how all the resources of divine love entrusted to each one of

us according to our various circumstances and ability may be, and by the true believer will be, utilized and made effective, as His own miraculous powers were, for the amelioration of the suffering, sorrow and sin of the world.

Christ's miracle of healing the leper laid the foundation for all that has since been done by His people in all lands, and that is being done to-day for the salvation of the leper, whether through leper asylums or in other ways. Yet within the limits of our Lord's ministry He could not Himself have become the responsible head of a leper asylum. That which is possible to us was not possible to Him. What is the Door of Hope in Shanghai? What are similar institutions in all lands where Christians are seeking to follow in the steps of Christ? What but a direct outcome of that wonderful narrative told in St. Luke 7 of our Lord's treatment of the woman who was a sinner? *That* woman was saved by the simple attraction of our Lord's compassionate holiness. But for rescue work in general, homes, refuges, and the personal sacrifices of many tender loving workers are needed, if the fallen are to be raised.

We read of Christ on one occasion blessing little children. You all know the story, you may have seen some beautiful picture representing the scene. He only blessed them. There were perhaps sick children in that crowd, but He opened no children's hospital. There may have been orphans among them, but He took no steps to found an orphan asylum for them. Yet from that scene what results have followed? This was the inspiration of a George Müller, a Dr. Barnardo and of countless other workers in other lands, who have founded great institutions and organized great societies permeated by love and devotion for the salvation of children. That act of Christ is largely responsible too for all the loving work that you may witness to-day in many of our mission hospitals in China as doctors and nurses vie with one another in tender loving care for little slave girls who have been almost beaten to death by their tyrant mistresses, or, as I saw in one case, for a little boy who had had his ribs broken by his father in a passion trampling upon him. The more one sees of the cruelty and sin which are responsible for the sufferings of many patients who are brought to our hospitals the more one feels how something more than medical remedies are needed for the evils in China that medical missionaries seek to combat. What is to reach the root of evil from which much of this suffering comes? Nothing but the bringing to China of the Gospel of salvation through the knowledge of Christ. It is not enough to try and remedy or counteract the results of sin. Christ's way is to eradicate the root of sin, and that is by the

salvation, the conversion of the man from whose heart the sin proceeds. Let no one then say: '*I* believe in medical missions' in such a way as to imply he disbelieves in other parts of missionary work. Let no one say '*I* believe in evangelization' in such a way as to imply that he has but little sympathy with works of ministry to the physical sufferings of men. Let no one say: '*I* believe in missions to our own countrymen' in a way to imply that he thinks Christ is no Saviour for the Chinese. Rather let the confession of each one be, I believe in Jesus Christ the Saviour of the world, and in all the saving, uplifting energy of blessing, wherewith He seeks to bless all whom He is not ashamed to call His brethren, and may it be the happiness of each one of us to have some part in that fellowship of salvation and of witnessing to Him and to His Father of which our texts this evening speak.

THE HOSPITAL HYMN.

At even, ere the sun was set,
The sick, O Lord, around Thee lay;
O in what divers pains they met!
O with what joy they went away!

Once more 'tis eventide, and we
Oppressed with various ills draw near:
What if Thy form we cannot see?
We know and feel that Thou art here.

O Saviour Christ our woes dispel,
For some are sick and some are sad,
And some have never loved Thee well,
And some have lost the love they had.

O Saviour Christ, Thou too art Man,
Thou hast been troubled, tempted, tried;
Thy kind but searching glance can scan
The very wounds that shame would hide.

Thy touch has still its ancient power;
No word from Thee can fruitless fall;
Hear, in this solemn evening hour,
And in Thy mercy heal us all.

Reports of Customs Surgeons.

GENERAL REMARKS ON CLIMATIC CONDITIONS PREVAILING IN CHANGSHA.

By H. G. Barrie, M.D., C.M.

Changsha is situated on the Hsiang river, and is said to have derived its name from the presence of a long narrow strip of sand (chang sha—long sand) which lies in the centre of the river and parallel with the entire length of the west wall of the city.

The city is an inland one, situated in the heart of China geographically. It is found well within the hot climate zone; and its latitude is but slightly north of the 28th degree. While this location brings it almost as far south as the extreme northern limit of the so-called rainless area extending from the 16th to the 28th degree north of the equator, a considerable rainfall occurs annually, owing to local physical configurations and the nature of the prevailing winds; and as might be expected a fairly high mean annual temperature prevails throughout the year.

The Hsiang river fluctuates greatly according to the variations in the amount of rainfall among the hills lying to the south of the province. Its volume of water is said to be influenced also by the backwash from the Yangtze and Tungting Lake. At times it presents the appearance of a fine river, and in the winter season it becomes reduced to an insignificant stream revealing shallow spots which effectually forbid steam-boat traffic even with the light draught vessels constructed for the Hankow-Changsha run, and which draw from three and a half to four feet of water. The city is a trifling height above sea-level and is surrounded by low-lying hills, which to the south and west break away into rather fine mountains. They attain to no great altitude, however, even in the south.

The soil is of a red clay formation and sufficiently dense to direct the flow of surface waters to the lower levels, where they collect and form natural reservoirs, and are utilized by the Chinese for irrigation purposes. In the neighborhood of the city land is well under cultivation and, while paddy-fields are numerous, the constant cultivation of the same, together with their arrangement in series of terraces on the gentle slopes of the hillsides rob them to a great extent of the dangers attributed to low-lying marsh-land.

The uncultivated areas are free from abundant vegetation and anything akin to a rich, rank undergrowth which would be likely to afford the

requisite shade and moisture for the prolific breeding of germ diseases. [Disease spreading insects. ED.]

The significance of the configuratiou of the surrounding country, formation of the soil, and the absence of true marsh-land, is witnessed to by a gratifying and remarkable absence of malaria. The few cases which are seen are of a mild and benign type.

The climate on the whole is equable, hut is essentially moist. The constant presence of a high percentage of moisture makes it a most trying one at times. During the hot months there are frequent intervals of cloudy weather accompanied hy light rain and attended at times by electrical manifestations. Were this season devoid of the slight breaks caused hy these periodic rainfalls, it would prove most relaxing and enervating. The hot season, beginning about the middle of May, is modified not ouly by these frequent rainfalls but also by two fairly constant inland breezes which correspond more or less accurately with the dry and wet monsoons. This blowing from the north or north-west is considerahly cooler than the other; while it prevails, however, the moisture iu the atmosphere appears to be greatly increased. The southerly breeze produces a more marked variation in the hygrometer, and while not so cool as the breeze from the north, it imparts a distinctly refreshing effect to the otherwise moist and relaxing air. During the year 1904, in the months of June, July and the first week in August, a soutberly breeze, alternating with a northerly breeze, was observed at times to veer to the west toward night-fall, where it remained steady for several bours, changing again toward the morning.

Iuorganic snbstances are at times found in the atmospbere. They are not, however, of local origin, hut appear as an impalpahle dust which comes driven before the north wind from the great dust-storm regions lying heyond the Yangtze. It tboroughly impregnates the atmosphere, enveloping the landscape in a mist-like haze and depositing considerable quantities upon smooth surfaces, furniture, etc. Bronchial and respiratory irritation is mucb increased at such times.

The atmosphere is quite free from organic impurities. The autumn weather sets in toward tbe end of Septemher and introduces a remarkably fine season, which is perhaps the choice portion of the year. This bolds good till well on into December, ahout which time a disagreeahle and penetrating cbill invades the air and continues till the beginning of the wet season. The cold is usually accompanied by one or more light falls of snow, which quickly disappear.

Each year has oue rainy season extending as a rule over the months of February, Marcb, April and May. During a wet seasou the total

rainfall is not large. In 1905 there fell in these months twenty-two inches in 432 hours. The total amount for the whole year does not appear to greatly exceed this ; the record for the year ending June, 1905, being approximately thirty-six inches. The wet season comes scarcely second to the hot in its depressing influence upon the physiological functions of the European resident. For days in succession the variations between the wet and dry bulbs are extremely slight, and at times there is no appreciable difference. The long, oppressive and lowering days, accompanied by their disagreeable moisture, appear interminable and are much more dreaded than the actual rainfall. The yearly thermometric variations range from twenty-six to one hundred degrees Fah. In any given season they are slight comparatively. During the hot season the variations are slight during the day, but at night an occasional drop may be experienced. Barometric variations are constant, but extremely slight.

The city possesses an excellent supply of sparkling spring water, which is abundant and accessible all the year round. The Hsiang river, when not in flood, furnishes an unlimited supply of clear potable water, which indeed is good at any time of the year after the removal of the inorganic impurities.

The Chinese population exhibits considerable energy and patience, and there is by no means the degree of laziness and apathy one is led to expect in a similar geographic situation. Changsha is a "city within the walls." There are no vacant areas inside and the houses are almost universally of a comfortable Chinese order and appear to be kept in good repair. The authorities exercise considerable care in maintaining the city wall in an excellent state of repair, and this, with the marked tendency to beautify desirable spots and the success in carrying out a fairly efficient scavenging system, combine to lessen the refuse nuisance, and consequently the danger to health arising from the same.

Inside the city, where the inhabitants get an insufficient supply of fresh air and sunlight, there is a marked evidence of diminished vitality. Tuberculosis of the lungs is by no means rampant ; and while it is true that this disease, in one or other of its forms, constitutes one of the three or four most common diseases seen in this section, it prevails in a strikingly large proportion of cases in the glandular, cutaneous and bony systems some appreciable time before manifesting itself as lung disease or involving the system generally. This indicates no little effort as well as success on the part of the human organism to throw it off, or at least an endeavour to localize it. Bronchial, venereal, skin and eye diseases are most common, and together with tubercular manifestations

constitute the bulk of the ills to which the flesh is heir, as represented in daily hospital and dispensary practice.

To the average foreigner the trying feature is the excessive degree of moisture which is ever present in the atmosphere. Physiologic functions are profoundly affected, and while not to that degree which would justify one to speak of the induced condition as disease, yet vitality becomes so weakened that the individual becomes an easy prey to disease. Hereditary weaknesses are prone to manifest themselves; and when acute disorder has once become established, convalescence is extremely unsatisfactory and recovery retarded.

One of the serious observations is the considerable lesseuing of lung vascularity which is experienced. There is a reduction both in the amount of blood going to the lungs and of chest and lung expansion. This causes much less fresh air to be consumed and less carbon to be excreted that is the case in Europe. Foreign ladies are subjected to an aggravated form of any disorder they may be suffering from. There is a distinct tendency to develop pathological conditions which have hitherto been dormant. Menstrual disorders, sterility, etc., are prone to manifest themselves. Children do very well for the first few years of their existence, but subsequently manifest indispositions which are due directly or indirectly to climatic conditions. They invariably become pinched and puny looking on the incidence of hot weather.

Periods of mental excitement with corresponding depression, loss of sleep and the presence of vague headaches indicate that the nervous system is more or less definitely affected. That nutrition is interfered with is seen in the fact that a loss of weight and an enfeeblement of muscular power is experienced. Digestion is somewhat tardy and the appetite lessened. The presence of troublesome constipation is also noted. The function of the skin is greatly stimulated and its irritability increased to an extent that makes it predisposed to a heterogeneous crop of disorders ranging from simple heat-rash to varnish, traumatic and germ inflammations. The climate on the whole is doubtless best suited to the residence of the strongest Europeans, and preferably to those whose native climate approximates even in a small way the climatic conditions found here. Satisfactory and sustained daily work is only possible for those who possess sound and vigorous bodies and who, by constant vigilance, avoid abusing them. A term of service extending beyond five years should not be considered for the average man; and whether the term be brief or long, it is necessary where the individual is run down by well-defined disease, anæmia or a vague debility, to leave the district in order to ensure progressive and satisfactory recuperation.

June 29th, 1905.

CUSTOMS MEDICAL REPORT FOR CHUNGKING FOR THE YEAR ENDING SEPTEMBER 30TH, 1906.

By J. H. McCARTNEY, M.D., Medical Officer.

The twelve months under review have been a very healthy year for the foreign community. During the time only one death occurred, and that was from accident. A sailor of one of H. B. M.'s ships accidentally fell down a deep ravine after night and broke his neck. He remained paralyzed for about eight days, at the end of which time he died from suspension of all the functions of the body. A second death occurred by suicide. A Japanese who represented some drug firm in Japan committed suicide by using his sword to cut his throat. The births have numbered four.

We have seen no signs of cholera since the slight epidemic in the latter part of 1904, and remittent fever only claimed two foreign patients during this time. Remittent fever among the Chinese has been considerably less than in the previous twelve months, which was due no doubt to the fact that heavy rains which washed out the city came earlier than the previous year and we did not have it so hot.

The meteorologic instruments of the Customs no doubt are of the best, and they were located by the director of the Siccawei Observatory, but I cannot help but believe that they have been wrongly placed from the fact that they register a very much higher temperature across the river from the city than in the city itself. It hardly stands to reason that in the city it would be cooler than outside. They get the reflected heat of the afternoon sun, which I believe accounts for their higher registrations, but I do not think that it is an accurate registration of the heat of Chungking.

A number of foreign buildings have been erected in the past year, and there is no doubt that the health of the foreigners has been materially improved by such building. The greatest factor in making of Chungking as healthy as it is, is the bungalows across the river; the majority of the foreign residents live there for the two hottest months in the summer.

The record that the school for foreign children has made within the past six years would prove beyond the question of a doubt that the hills of Chungking are as healthy or healthier than the average boarding-school location in the home land.

The Chinese have at last awakened to the fact that vaccination from the scab of another patient is dangerous and that disease may be

communicated thereby. It seems that the principal vaccinator of the city (who by the way has become rich from it) was the cause of a large number of deaths through his septic way of vaccinating, and the old way has come into disrepute, so much so that a prominent Chinese gentleman in the city has come forward and offered to pay for all vaccine and the cost of operation. He has billed the city and requested the people to call upon the writer and be vaccinated at his expense. This is true reform, and it gives us hope for the future when we see men awakening to the fact that their old methods are worse than ineffective.

We had an interesting cæsarian section case a few months since. We operated on the same woman two years previous, at which time we only had native assistants, and on account of the woman's serious condition we did not tie off the tubes or do a historectomy as is our custom. One year following operation she became pregnant again, but was not brought to the hospital till two days after labor commenced. When she came she was in a state of collapse, and we did not have any hopes of saving the mother, but undertook the operation in the hopes of saving the baby. She was prepared, and under light *chloroform* narcosis the abdomen was opened and the uterus brought out. When the uterus was expelled she stopped breathing and became pulseless. We proceeded with the operation quickly, and by the time the tubes and ovaries had been tied she had revived somewhat, so that we felt warranted in proceeding with a historectomy, which was done. By the time the operation was finished she was in better condition than at the beginning of the operation. The operation was complicated by great distention of the bowels with gas, so much so that it was impossible to keep them within the abdomen. Her bowels had not moved for six days, and she presented symptoms of obstruction. As soon as the operation was finished she was given *calomel* in divided doses, which together with a high enema the next day produced the desired effect and her bowels moved freely. She lived five days, which was remarkable considering the condition she was in when operated upon. The baby lived, and at last accounts was doing well. The baby that was delivered in the same way two years ago is now a fine large child.

An out of the ordinary osteo-sarcoma was operated upon during the year. The patient, a tailor by occupation living in a neighboring city, presented himself with an osteo-sarcoma of the lower jaw, of six months standing. The entire lower jaw from the temerpo-maxillary joint on the right side to the second molar tooth on the left side was removed. The wound healed without suppuration, but in about two weeks the parotid gland on the side on which the tumor was located, suppurated, which

delayed his convalescence much longer. The results were very satisfactory to the doctor and patient.

Venereal diseases are on the increase in this port, and after sixteen years' practice among the Chinese, I can but reiterate what I have already said, that I attribute it to the presence of the foreign gunboats in the port.

Internal and external hæmorrhoids are a very common complaint with the natives of this place, and not a few foreigners develop them after being here a while. The excessive use of red peppers in their food by the natives is no doubt the exciting cause in many of the cases.

The operation we generally do is a modified Whitehead, where we pull down the mucous membrane and stitch it to the anal margin. This gives us a perfect result with no tendency to stricture, whereas the old operation was generally followed by a stricture which gave the patient about as much trouble as the piles themselves.

We are indebted to the Harbour Master, Mr. Parker, for the meteorologic table and to the former Harbour Master, Mr. J. H. Barton, for the heat register for the past ten years appended.

METEOROLOGICAL TABLE. 1905-1906.

1905	Rainfall.	Barometer.		Thermometer.		River.			
	Inches.	Max.	Min.	Max.	Min.	Highest.		Lowest.	
						Feet.	In.	Feet.	In.
October ...	7.18	29.981	29.235	83	50	54	4	22	3
November.	3.50	30.002	29.303	68	46	26	3	11	7
December.	1.44	30.063	29.174	63	40	12	3	6	4
1906.	...	...	...	...	...	...		...	
January ...	50/100	30.041	28.877	59	35	7	6	2	5
February ...	18/100	29.286	28.614	69	40	3	1	1	7
March ...	1.08	29.399	28.557	84	40	4	0	0	11
April ...	4.27	29.128	28.618	82	55	16	3	2	6
May ...	3.56	29.092	28.538	97	61	26	4	13	9
June ...	6 12/100	29.115	28.482	96	70	52	2	16	9
July ...	1.00	29.214	28.902	107	71	61	1	20	2
August ...	8.29	29.403	29.005	85	70	74	6	27	3
September.	1.93	29.645	29.171	102	65	50	5	24	5

A. H. PARKER,
Harbour Master.

Chungking, China.

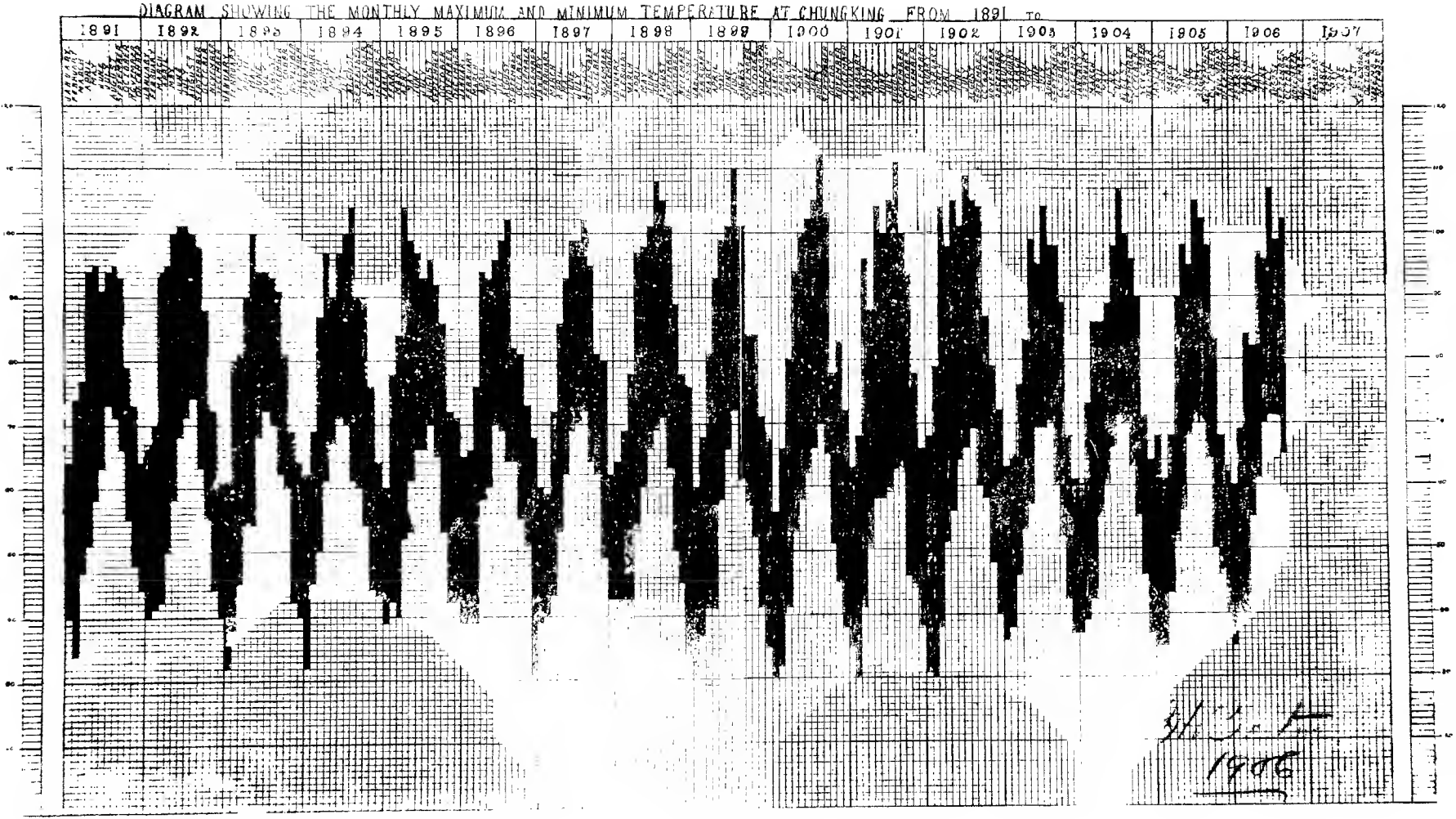


DIAGRAM SHOWING THE MONTHLY MAXIMUM AND MINIMUM TEMPERATURE AT CHUNGKING FROM 1891 TO
1891
1892
1893
1894
1895
1896
1897
1898
1899
1900
1901
1902
1903
1904
1905
1906
1907
1906

In Memoriam.

DAVID GRANT, M.D.

Dr. Grant joined the English Presbyterian Mission in 1880, and in the following year commenced medical work in Chin-chew. He was the first resident missionary in that large city, where for several years he lived, in unsanitary rooms, entirely alone, except for the visits of fellow-missionaries. The work from the first was very heavy. On out-patient days more came than could be dealt with, and when the hospital was ready for in-patients, more usually applied than could be accommodated. In all departments of the medical work he had to depend entirely on students trained by himself, and at first, as they were necessarily inexperienced, the strain upon him, especially when performing major operations, was tremendous. He performed successfully many difficult operations, and in a few years his fame spread far and wide. Prejudices against foreigners gradually lessened, and a welcome to the preachers of the gospel was accorded in many a town and village by old patients and their friends. He was a man of great ability, a very capable physician, and also naturally kind and sympathetic, so in an unusual degree he won the confidence and affection of his patients and indeed of all who came into close relations with him. His students were devoted to him. He was firm and strict with them, so that, till they knew him better, they rather feared than loved him. When any of them happened to be sick, his unremitting attention made them realise how truly he cared for them. Once, as he stood looking at one who was not expected to recover, he could not restrain his tears. In that way the depth of his love was revealed and they never forgot it.

His ideal of the medical missionary's work was very high. His aim was to have all connected with the hospital—coolies, cook, door keeper, students, as well as the hospital preacher—not only true Christians, kind and courteous to the patients, but also real evangelists, seeking by all means to save some. He also aimed at making the hospital a place where the other half of the commission—"heal the sick"—was efficiently carried out. To increase his own efficiency he studied medical journals, and the newest medical works, consulted with fellow-missionaries, and continually pondered over his cases, following the hint given to him by an eminent Glasgow doctor, who said: "I always pray about my cases," and added, with a significant look: "I also make a point of knowing about them all that can be known."

Dr. Grant seldom referred to his own experiences, but I remember his saying that books or journals he had been reading, perhaps the night before, sometimes put him on the right track of dealing with difficult cases, and he indicated that he regarded such timely hints as answers to prayer. Indeed he prayed continually about all connected with his work. He was in the habit of praying with his students before operating and also before giving them lectures. One could not be long in his company without realising that he was a man of God, and that his supreme aim in all he did was to lead men to Christ. Though he himself shrank from conducting stated services, the few words he did say made patients and others feel that in his estimation the gospel was of paramount importance. His students were impressed by his earnest desire to save men, and some of them gave a good deal of their precious time to speaking to patients in the wards and to conducting services in the hospital chapel, and also to preaching in the street chapel.

To the training of his students he gave much time and thought. He had striking ways of pressing home his instructions. He saw to it that they treated all patients, rich and poor alike, with courtesy and kindness. He did not allow his students to accept presents from patients, nor would he accept any for himself. When grateful patients offered him presents his invariable reply was, "I never take presents, either from rich or poor. If you wish to show your gratitude, contribute to the hospital." This, many did, but some wished to do more. A wealthy Foochow merchant, a native of the Chin-chew district, grateful for the cure of a nephew, gave a handsome donation to the hospital and used his influence so that we opened, without opposition, a church in his native place. In addition he wished to give somethiug for the doctor's own personal use, so sent a large supply of hrandy and Chinese whiskey. Dr. Grant sent it all back, saying his rule was to accept no presents and that besides he never tasted whiskey or brandy. Not to be baffled in his purpose, the merchant sent, direct from Foochow to Dr. Grant's mother, iu Sutherlandshire, Scotland, a box of the very finest tea grown in China.

Owing to failure in health Dr. Grant, in 1894, was relnctantly obliged to leave his chosen work, but continued to take the deepest interest in the mission and still cherished the hope that he be able to return. He took up practice in Iuverness, but found the winters too tryiug. He then went to Los Angeles, where he so far regained strength that in the spring of 1906 it was thought he might safely come back to the East. His instruments were sent on from San Francisco and he himself set out for China by way of his uative land. On reaching Englaud

he was again medically examined and the risk was considered so great that he had to give up all hope of returning to the work and people he loved so well. About a year after resuming practice in Inverness, the call came to him "to depart and be with Christ." When the tidings reached Chin-chew a memorial service was held. One of his students, now a respected elder in the church and a successful physician, summed up his appreciation of Dr. Grant by saying: "He did not care for wealth, nor his own fame, nor his own comfort. He cared more for others than for himself." Reference was also made to his love and sympathy and his intense desire to lead the Chinese to Christ. Some spoke of his unfailing and punctual attendance at all the services, both in the hospital and the church, even when worn out, weak and ill.

When one asks how did this quiet, unassuming man so win the respect, confidence and love of the Chinese and his fellow-missionaries and indeed of all who intimately knew him, the answer is, he himself was full of that love which seeketh not its own. Impelled both by nature and grace he sincerely sought the welfare of others. His charm and power lay in his likeness to Him who "came not to be ministered unto but to minister."

J. W.

"Grant lived his life strenuously and largely alone for fourteen years in the great city of Chin-chew with its 200,000 people as if it were his set purpose never to be known or recognised. He never wrote a missionary letter home and he never spoke at a missionary meeting. He wore a habitually sad and lonely look until he responded to anyone speaking to him. He glistened with laughter then. He never caused his voice to be heard in the streets, yet tens of thousands of Chinese people knew him and were drawn to him. Many loved him with a devotion that came near to worship.

A lady missionary returning to England was being charged by a Chinese Christian with very special messages for Dr. Grant. 'Why are you so anxious about these messages?' she asked. 'Koniu,' he said, 'there is one great God over all, and there is *the* doctor.' Yes, at the very most you can only meet one David Grant."

A. L.

"His forebears belonged to the class of men whose godliness and evangelical zeal made the Parish of Creich famous in the north of Scotland, and very early in life he began to love and follow his Saviour. He had great intellectual gifts and he was thorough master of his profession; but perhaps his profound human sympathies more than

anything else account for the remarkable success which attended his medical work. Withal, he was humble and as devoid of self-consciousness as a little child. Yet his quietness and diffidence hid from no one who came in close touch with him, the force and firmness of his character. Into his fourteen years in China he put, by his devotion to duty, his strenuous exertions and his superb methods of work, more than most men put into a long life time."

D. C.

To me the most outstanding feature in David Grant's character was his intense kindliness manifesting itself in wise, sympathetic, personal interest in all those with whom he came in contact. It was a very revelation of the Divine Nature.

With reference to his surgical work, he performed one of the "biggest" operations ever done in China—the removal of a scrotum affected by elephantiasis. The tumour (which was heavier than the man) weighed 110 pounds. The success of the operation may be gauged by the fact that the patient's wife—who had deserted him—returned to her place and afterwards bore him children.

P. B. C.

ROBERT EDWIN WORLEY, M.D.

At Swatow, June 27th, occurred the sad accident which deprived the A. B. M. U. of one of its most valued members. In crossing the bay to Kak-chioh, where the mission compound is located, the native ferry which he had taken, capsized, and Dr. Worley was probably caught under the boat. All efforts to rescue him were unsuccessful. His body was found three days later, and followed by a large concourse of friends, Chinese and European, was interred in the foreign cemetery at Kak-chioh. Our bay is a treacherous bit of water, but neither tide nor wind would seem to account for what occurred. This must rather be laid to the charge of unskilful handling of the boat.

Robert Edwin Worley was born near El Paso, Ill., in 1870. He is one of a family of eight children, all of whom, with the father and mother, are still living. A younger brother, Lewis, recently graduated from Rochester Theological Seminary, is now under appointment for Swatow, and will come out this autumn.

Dr. Worley was converted at the age of fourteen or fifteen years and longed to prepare himself for preaching the Gospel, "but as the years went on he became convinced that his ministry lay in living the Gospel by hand rather than by tongue."

While a student in the State Normal near Bloomington, influenced largely by Horace Pitkin, he consecrated himself to foreign mission work. After graduation in 1896 he gave three years to teaching and other educational work, and then entered Rush Medical College, Chicago, from which he was graduated in 1903. August 25th, he was united in marriage to Miss Prudence Campbell, who had early in life consecrated herself to missions. She expects to remain on the field, doing evangelistic work, for which she is so well adapted naturally and by training. In the same year they were accepted by the American Baptist Missionary Union and in the autumn were sent to Swatow, where, after three months, Dr. Worley took charge of the hospital.

His in-patients numbered from thirty to eighty. In addition, a dispensary was conducted every day, excepting Thursdays, which were given to like work at Chao-yang. Here his ministry of healing was not confined to the dispensary walls, but on the wharves and on the launch and along the road and streets, he was consulted by all sorts and conditions of men with the greatest freedom, so kindly was his way and so confident were they of his help. This has been the best commendation of Christianity to the Chinese, and has done not a little to break down the hostile feeling toward foreigners. A few at least, by his self-denying service for them, have certainly learned that not all foreigners are self-seeking.

Looked at from one point of view, Dr. Worley met his death as any man might wish to die, in the course of performing his every-day tasks. Looked at from another point of view, it seems a great loss of life and training thus to have cut short a career of such extraordinary promise. I say "extraordinary promise," for such was Dr. Worley's life. A medical missionary's life is not to be measured by his skill as a practitioner alone, but by the influence of his life upon those whom he has come to serve. Dr. Worley had been on the field less than four years, but in that time he had won the love and confidence of the people to such an extent that few men in dying have been mourned as he. On every hand, amongst Christian and heathen, high and low, have been expressions of sorrow. He was so quiet and retiring amongst foreigners that few of us realized the depth and extent of his influence on the Chinese.

Paul's advice to Timothy, "give thyself wholly to them," was good advice to the preacher, and expresses well the leading characteristic of Dr. Worley's ministry of healing. So far as I know he never refused a call far or near, night or day, winter or summer. His own personal preference or his own ease never seem to have been considered for a

moment. Some of us thought he was wearing himself out in unappreciated service, but we are silent now. We see that his life and its living were in the hands of Him who sees from the beginning and who makes no mistakes.

Dr. Worley did no slipshod work. Had he done this, he never would have won the confidence of the Chinese, however kind and willing the service rendered. Dr. Worley won them because he loved them and *healed* them. He gave unstinted care and consideration to each case, believing that the missionary who gave less than his best, fell short of doing his duty. He often expressed the wish that he might give years to this work, but God ordered otherwise and called him to higher service. He lived a short life, but lived it well to the glory of God and the honor of his calling.

A. F. GROESBECK.

S. R. HODGE, M.R.C.S., L.R.C.P.

Since it has pleased Almighty God in His Divine Providence to take from our midst our co-laborer in this field, Dr. SIDNEY R. HODGE, we the undersigned members of the Faculty of Boone College and its Departments, have framed the following resolutions:—

Resolved I: That while bowing to the Divine Will we wish to place on record this token of our esteem for our departed friend and brother and our gratitude for his blessed, holy Christian life, and our sincere sorrow in this our loss.

Resolved II: That we express our deep sympathy with the bereaved family in the great affliction which has come upon them and pray that the comforting presence of the Holy Spirit may be vouchsafed to them in their time of trial.

Resolved III: That a copy of these resolutions be put on file, printed in the *Boone Review*, and that a copy be sent to each of the following, viz, *St. John's Echo*, *Chinese Recorder* and *The China Medical Journal.*

(Signed)

JAS. JACKSON, President.
L. B. RIDGLEY, Dean of Divinity School.
A. S. COOPER.
HOWARD RICHARDS, Jr.
ROBERT A. KEMP.
MARY VERNON GLENTON, Medical Department.
WILLIAM CRAIG MARTIN.
ARCHIE T. L. TS'EN.
W. K. LOWE.
DAVID Z. T. YUI.
BRYANT LIU.
WEI SHA-FANG.
NEWTON S. K. T'SUI.
RICHEY T. T. WU.
PEARSON BANNISTER.
JOHN A. WILSON, Jr., Secretary of Faculty.

The China Medical Journal.

VOL. XXI. NOVEMBER, 1907. No. 6.

Editorial.

A SAND-FLEA.

There once was an infant Chinee
Was requested to pause by the sea
In the interests of art,
But his speedy depart-
Ure disclosed but a flitting sand-flee.

THE CUSTOMS MEDICAL REPORTS.

An arrangement has been made between the authorities of the Chinese Imperial Maritime Customs and the JOURNAL, whereby in future the reports of the customs surgeons will be regularly printed in our issues and afterwards supplied by the customs in the form of reprints. Those which appear in any one issue will be found together under the title of "Reports of Customs Surgeons."

The arrangement promises to give general satisfaction. To the customs authorities and the customs surgeons, it assures the prompt and careful publication of their valuable contributions to the fund of scientific medical knowledge of things and places Chinese. In the past it was the custom to allow these to accumulate for some years and then get out a lot of them together; some of them thus losing their freshness and even their value, and necessitating con-

siderable patience and involving inevitable loss of interest on the part of those supposed to send in regular yearly reports. Besides this delay, the old plan afforded no definite or wide reading public for papers which have, many of them, a very positive scientific value for any and all interested in the nosography and climatology of China. Now these papers will reach the whole body of those most interested—the only purely scientific body in China—and also the medical reviews and societies of Europe and America.

For the JOURNAL it is a distinct gain in scope and interest and will serve to broaden its reach and to unify the medical body in the East.

We have at present the accumulation of some years of such reports as have reached the Statistical Secretary, Mr. H. B. Morse, to whose efforts the consummation of the whole arrangement is due. Some of these papers have largely lost their meaning, but others, though of several years' standing, are of distinct value and well worth publication, either because of their intrinsic merit, or because of the isolation of the writer and small knowledge we have of the locality. Certain of these older papers we shall print from time to time, and we offer this explanation of the fact, but new papers will always have the right of way. The few papers of French or German authorship will, notwithstanding that the Association is largely English-speaking, be published in the language in which they are written.

In this connection we would say to the customs surgeons in general that all medical practitioners in China or the East are eligible to corresponding membership in the Association, and whether as such or otherwise are always cordially welcome to contribute matters of professional interest to the pages of the JOURNAL.

A QUESTION OF TITLE.

We have within the Association's ranks a goodly proportion of the gentler sex, graduates in medicine, in the best of professional standing. We recognize with pride the distinguished ability of some, the more modest industry of others, the charm, the refinement and the Christian womanliness of all.

We should like to have their opinion on a matter which concerns themselves and also the editors somewhat, namely, by what appellation do you desire to be collectively called? We receive certain communications, chiefly British in origin, which use the term "lady physician;" others, chiefly American in source, which say "woman physician" with equal fidelity and positivity.

Of course a doctor is a doctor, and Dr. Mary Jones is presumably feminine in nature. But the general term is needed, as when we speak of a new —— doctor for such and such a station, or collectively of our sisters in the profession.

Even in the editors' sanctum there is a very amicable diversity of usage, and though there is no money up on the question we should hugely enjoy a few spicy remarks and opinions to indicate how reason those most concerned. Do they prefer to have their refinement so labelled or to have it taken for granted and no questions raised? Is there a better term than those suggested?

THE PROGRESS OF ABDOMINAL SURGERY.

One of the features of the last ten years has been the great progress which has been made in the treatment of abdominal disease by the surgeon.

It is now clearly recognized that the area in which is included the dome of the diaphragm is one in which absorption of poisons takes place with great rapidity and that it is very important that, as far as may be, this area be kept unsoiled.

The practical result is that irrigation of the whole abdominal cavity is employed seldom, and a patient with sepsis in the lower part of the abdomen is after, or even before operation, placed in a semi-sitting posture.

It is also now acknowledged that the covering of lymph found on the intestines in a case of general peritonitis is partially at least protective and one does not now eviscerate the abdomen and sponge off this lymph coil by coil under the impression that it is a source of danger.

It is also recognized that the peritoneum has a good deal of power in dealing with doses of poison, and the result is that

drainage is employed with much more discrimination and for a shorter period of time.

The occurrence of ileus is better understood, though in some points its pathology is still douhtful. Purgatives are used to a greater extent, and at an earlier date than formerly, and the value of the *turpentine* enema, *magnesium sulphate* and *strychnine* is settled heyond a douht.

Morphia has taken its proper place. Whilst occasionally given for extreme restlessness, it is now clear that this drug aids in the production of ileus and should he avoided as far as possihle after all ahdominal operations.

Simple suture for perforating ulcers of the stomach and duodenum has practically superseded all attempts to excise the ulcer, and gastro enterostomy has taken its proper position as the surgical treatment for cases of gastric and duodenal ulcer which fail to yield to medical treatment.

The posterior operation has, to a large extent, taken the position of the anterior operation in the performance of gastro enterostomy.

The formation of a lateral opening hetween the two portions of howel on either side of the gastro enterostomy opening has not gained any great favour, and is denounced as unnecessary hy some of the most skilful surgeons in this class of operation.

In the treatment of appendicitis the advocates of early operation have more than maintained their position and as it is clear that a numher of those who have passed through operations for the simple evacuation of ahscesses connected with the appendix, have suhsequently to he subjected to appendicectomy, many now endeavour to secure and remove the appendix at the same time that the ahscess is opened. Providing that this is done with due care, it does not seem that the danger of the operation is much accentuated.

Progress has undouhtedly been made in the operative work which deals with the ureters and hladder. Improved methods have been devised and many successful cases have heen recorded of implantation (a) of the ureters and portion of the hladder into the rectum in cases of extroversion of the hladder, (h) of implantation of the ureter into the colon, (c) of implantation of the ureter into the hladder.

Further progress has also heen made in the methods of dealiug with ureteral calculus and the suture of the incised or divided ureter.

With reference to the operative work relating to the gall bladder and bile ducts the methods already devised have been improved and in many cases made nearly perfect. Cholecystotomy still maintains its position, in spite of the persistent attempts of some operators to replace it in all cases of biliary calculus by cholecystectomy. It is also now well recognized that a cholecystotomy may greatly benefit certain inflammatory conditions about the head of the pancreas. As to operations on the pelvic organs, it seems not unlikely that a complete abdominal-vaginal hysterectomy may replace the old operation of vaginal hysterectomy for cancer. The initial danger is of course greater, but the final results are, as far as one may judge, much better as regards the recurrence of malignant disease.

With regard to ovariotomy but little needs be said. The removal of ovarian tumours and cysts and broad ligament cysts is undertaken with complete success by a vast number of operators.

Partial operations for the removal of fibroids have latterly come more into prominence, but seem unlikely except in certain individual cases to replace the operation of supravaginal hysterectomy. As to ruptured tubal gestation but little need be said. The question of immediate operation is still debated. In cases in which extra-uterine gestation has gone to term opinion is still divided as to whether operation should be performed at term, or the case deferred till the fœtus is dead. For both sides a good deal may be said and the question is not finally settled.

As to the suture of divided intestine a number of new clamps, some of which may find a place in future work, have been placed on the market. Simple suture still holds its own, whilst in cases needing to be done with great rapidity Murphy's button or some such appliance is most useful. Senn's plates for lateral anastomosis seem to have practically dropped out of use.

The struggle still continues as to the best way of suturing the abdominal wound so as to secure firm union and the avoidance of a subsequent ventral hernia. It seems clear that the main thing to seek is first intention of the wound. If this is secured hernia rarely follows, and whether it is secured by suture in layers, or through and through stitches properly inserted, seems immaterial. If the wound does not heal by first intention the buried sutures may prove a great nuisance.

Some surgeons make a point of not opening the abdomen in the exact middle line but through the sheath of the rectus. As to the precise value of this proceeding, it is doubtful whether any great benefit is secured thereby.

Chloroform still holds the premier place as an anæsthetic for abdominal operations. *Ether* does not seem likely to displace it in this field of surgery, still less any form of local anæsthetic. Spinal anæsthesia has not come into general favour and as to local anæsthetics the failure to secure relaxation of the abdominal muscles and the presence of the patient must always prove deterrents to their use.

As to ligatures. Silk for the intra-abdominal work and silkworm gut for the suture of the abdominal wall seem likely to hold their own. The thicker kinds of silk are now but rarely used, and number four is found to be thick enough for all ordinary cases.

There is more and more a feeling against the use of strong antiseptics in the abdomen and boiled water and saline solution seem likely to be generally used.

A great many surgeons advocate the leaving of a pint to a pint and a half of hot saline in the abdomen, as this undoubtedly diminishes the thirst from which so many patients suffer.

Less and less reliance seems to be placed on rectal feeding, and many surgeons allow their patients back to normal diet as soon as the bowels have been satisfactorily opened.

J. P. M.

DR. McALL ILL.

We have been grieved to hear that Dr. P. L. McAll, of the L. M. S., Hankow, who is at present on furlough, is lying seriously ill with typhoid fever in Edinburgh. We trust that the next mails will bring better news of his condition. Our friends will join us in sympathetic prayer on his behalf.

THE STATISTICS AGAIN.

We are by no means satisfied with the statistical returns which are made year by year by the various hospitals, nor are we, *pace** the other editor, quite satisfied with the "return sheet" provided by our

* NOTE. "Me too!"—Other ED.

JOURNAL for such statistics. We know that valuable statistics are hard to obtain. It is easy to get returns dealing with the number of out- and in-patients seen and operations performed, and also the amount of money received and spent, but it is difficult to get such returns as are worth getting.

Fallacies occur all along the line, and we fear it will be ever so while we continue to run our hospitals as at present. Did space permit we could by illustration show how the present system fails to give information which is of value as a guide to others.

We have been making a careful study of the reports which reach us from time to time, and we find that there seem to be as many ways of making statistical returns as there are doctors and hospitals. One would think that on the simple question of out-patients there would not be much room for difference. Yet we find some who divide their out-patient numbers into new and old merely, while others put in a third class, viz., "daily dressings;" these latter, we presume, are *not seen* daily by the surgeon, but dressed by the native staff.

The number of beds and the number of in-patients seem to be fairly reliable all round, although we can see how fallacies may even arise in these matters. Sometimes on dividing the number of in-patients by the number of beds available for such we are struck by the fact that either very many of the patients can only remain in a few days, or else a good many must be accommodated elsewhere than in beds, presumably on the floor! With regard to operations considerable divergence is noticed. What should be included under the head of operations? It is difficult to find the happy mean. Some hospitals, as judged by their reports, seem to count everything from the removal of a tooth or the scraping of an ulcer in the out-patient department to the amputation of a limb or abdominal section in the operation room. Couldn't we get uniformity along some line or another? Let us separate completely in our reports the out-patient department and its work from the in-patient department! Even here, however, we should make a subdivision; many slight and comparatively unimportant things are done in the wards and should never be classed under operations in the proper sense of the term, e. g., we have noticed some hospitals

whose operation list contains so many "paracentesis abdomin." It sounds well, but still, should we class it with operation room work? A fair division seems to be one which puts the question of anæsthesia to the front, and classes as operations worthy of the name such as are done under anæsthesia, i.e., *chloroform*, *ether*, A. C. E., *ethyl chloride*, *cocaine*, etc. Even here we may find a fallacy; still it would be difficult to get a much more reliable system.

On the financial returns and the conclusions which are at times based on them a good deal may be said. People, interested and uninterested in medical missions, glance down the schedule and see one hospital of so many beds costing so much money per annum, and close at hand they notice another hospital of the same number of beds run for considerably less. No wonder they ask the reason why, and allege extravagance against the one, whereas it is seldom we hear the question of the efficiency or inefficiency (more probable) of the other called to account. This difference in annual expenditure may result from various causes, not one of which is even hinted at in our reports or schedules. We think we may safely say it is seldom the question of *extravagance* or that of *inefficiency*. From what we know of the various methods of hospital running and account keeping we think we see other reasons.

In some hospitals the food account never appears in the annual financial statement, simply because the patients deal directly with the cook, and the food receipts and food expenditure never pass through the hands of the doctor in charge, and hence never appear in his accounts. Other hospitals, however, proceed along different lines and control the food arrangement, with the result that the food receipts and kitchen expenditure necessarily appear with the annual financial statement of accounts, thereby causing an apparent increase in the cost of running. Other points might be dealt with, but time and space both forbid. Can we do something to bring about a better order of affairs, so that our annual reports and our statistical schedules may be something more than matters of curiosity. Let us be honest in all things, even in the counting up of our patients and the schedule of our operations.

PUBLICATION COMMITTEE.

As some must be disappointed at the delay in publishing our medical works it should be stated that this is partly due to the large amount of time absorbed by work on nomenclature. The committee feels that the most urgent piece of work is the issuing of a complete medical nomenclature. This is basal to all our publications. Many consultations on knotty term problems have been held by members of the Terminology Committee, and this autumn and winter the Editorial Secretary's time will be almost wholly occupied with compiling and publishing this book. It has been found impossible meanwhile to proceed with the printing of Osler's medicine. No one who has not worked at it can realize the infinite pains required in drawing up a scientific nomenclature.

The delay in the case of one of the text-hooks is largely due to the translator's thoroughness leading to such a recasting of the manuscript that it may he said to he a retranslation. Then too the presses in China in dealing with hooks printed in both Chinese and English cannot work expeditiously.

The lack of funds and the extreme technicality of the subject prevent the secretary from obtaining efficient Chinese assistance. There are at present three books ready for the press, had we the money to justify us in printing and the time to read the proofs.

Rose and Carless' Surgery has been taken as the basis of a Chinese surgery, and the work is being divided among several translators so as to produce it as soon as possible.

If any members are doing, or plan to do any translating, will they please communicate with the secretary that there may be no overlapping?

If any who intend teaching any of our books will obtain the English original they will find their task greatly lightened. This is especially true of the more technical books. The English works can be ordered through the Mission Presses or home booksellers. The names are given below:—

Obstetrics. —Evans (Montreal), Lea Bros., Philadelphia.
Gynecology. —Penrose, 5th edition, ,,
Physiology. —Halliburton (Kirke), John Murray, London.
Therapeutics.—Hare, Blakiston, Philadelphia.
Bacteriology. —Archinard, Lea Bros., ,,
Skin Diseases.—Duhring, Blakiston, ,,
Eye. —Norris, ,, ,,

Whitney's translation of Gray's Anatomy and Gillison's translation of Luff's Chemistry use the new nomenclature and are therefore in line with our publications.

SUBSCRIPTIONS TO THE PUBLICATION COMMITTEE FUND.

Dr.	De Vol (additional) ...	$2.00	Dr. E. C. Peake 5.00
,,	Judd	5.00	,, McWillie (additional)... 5.00
,,	Myers	10.00	,, Machle 5.49
,,	Butchart (hospital) ...	50.00	,, Gillison... ... ... 10.00
,,	W. H. Jefferys (special).	50.00	,, Booth 5.00
,,	Morley (Tls. 20) ...	27.78	,, H. B. Taylor 15.00
,,	E. F. Wills	5.00	
,,	Huntley	5.00	$200.27

NEW MEMBERS OF THE C. M. M. A.

Joined through the Manchurian Branch, June, 1907.

Miss I. Aitken, L.R.C.P. and S.E., U.F., Liaoyang.
Miss E. J. Miller, M.D., Ch.B. (Glas.) U.F., Mukden.
Miss M. E. McNeill, L.R.C.P. and S.E., M.B., Ch. B. (Glas.) I. P., Kwangchengtzu.
Miss J. D. Mitchell, M.D. ... ... I. P., Fakumen.
R. J. Gordon, M.A., M.B., C.M. ... I. P., Kwangchengtzu.
Walter Phillips, M.D. ... ... I. P., Newchwang.

Joined through the Korean Branch, September 9th, 1907.

E. D. Follwell, M.D. ... ... M. E., Pyengyang.
J. W. Hirst, M.D. ... ... A. P. N., Seoul.
W. T. Reid, M.D. ... ... M. E. S., Songdo.
Mary M. Cutler, M.D. ... ... M. E., Seoul.
Emma Ernsberger, M.D. ... ... ,, ,,
Mrs. L. B. Tait, M.D. ... A. P. S., Chunju.
Kate McMillan, M.D. ... Can. Presb., Wonsan.
W. B. Scranton, M.D. ... Unattached, Seoul.
H. Currell, M. B., Ch.B. ... Aus. Presb., Chinju.

Joined through the Kuling Branch, Summer, 1907.

W. E. Robertson, M.D. ... A. P. M., Hengchowfu, Hunan.
W. L. Berst, M.D. ... A. P. M., Changteh viâ Hankow.
J. W. Bradley, M.D. ... A. P. M., Sutsien viâ Chinkiang.
Mrs. T. Gillison, L.R.C.P. and S.E. L. M. S., Hankow.

NOTES.

Tabes seems to be somewhat prevalent amongst the medical missionaries of China. The secretary can testify to the frequent absence of any reflex action, and as the stimulus was properly administered it is greatly to be feared the lesion in the arc is usually a central one. Few

answers were received to a cordial invitation to 30 or 40 outsiders to join our ranks. There is a considerable number of medical missionaries who are not members of the C. M. M. A. Brethren and sisters, this ought not so to be. Let each of us be a recruiting agent until all, whether old residents or new arrivals, have enrolled themselves. It will be good for them and good for us. Some are only waiting to be asked, some have written "I have long wanted to join, but did not know how." Among recent proposals are those of Dr. Shelton, of Ta-chien-lo and Dr. Clarke, of Ta-li-fu. It is a far cry to these distant outposts. Let us remember to pray daily for each other and for the work of the Association that strength and grace may be abundantly given and His work prosper in our hands.

This same tabetic condition is affecting our treasury. Our dues, $4 a year, are due in January. Have you paid yet? Don't keep the poor Presbyterian Press tapping your unresponsive tendon all the year. Kick out now please. I hesitate to mention it, but it would seem some have not paid for three years—a very chronic condition.

We have received a quaint silvery sheet with this legend:—

1882—1907.
Dr. and Mrs. George Arthur Stuart
At Home
Saturday, October Twenty-sixth.

Our warmest congratulations to our honoured president and his dear lady. If our greetings are necessarily a little belated they are none the less of the heartiest.

Haven't you sometimes wished for helpful Chinese phrases along the line of your medical work? One of our Mandarin-speaking members mentioned recently that he found "Hospital Dialogue in Shanghai Thoo-bak" most useful. The changes of vernacular were easily made.

Korea is forging ahead. Look out for your laurels, Central China! Benjamin may beat Judah. Welcome, latest olive branch! The trunk salutes you! It also wonders why its silvery sides are not adorned with more fair twigs. Come now, North China, Canton, Fukien, Szechwan, etc., do some sprouting!

Dr. Scranton, of Seoul, has been appointed to a chair in the new Korean Government Hospital Medical School and set apart at present

for the preparation of a medical and scientific dictionary and other literary work for Korea. He hopes to be able to get the fullest equipment for the work at the earliest moment, but feels in something of a difficulty with the C. M. M. A. terms on one hand and the Japanese on the other. He writes: "We as yet have no settled vocabulary of a scientific sort, but are groping." We have groped too for many years, but think we see light among the tree trunks now. "Good hunting, brother," as Kipling says. When it is mentioned that the acquisitive Scot bulks largely on the Nomenclature Committee, you will credit the statement that it has creamed the Japanese and all other dictionaries it could lay its hands on! If our Chinese terms can be of any help to you in your great work we shall feel doubly repaid for our labour.

Over 140 answers were received to the circular *re* MEDICAL SCHOOLS, an unprecedented return which shows keen interest in the subject. Details as to the results of the voting are being sent to our members. Suffice it here to state that the general opinion with reference to schools teaching in Chinese is in favour of a FEW GOOD ones, e.g., one each in the North, South, East, West and Centre of the empire. Amalgamation of existing schools in these districts is urged and a strong pronouncement is made in favour of UNION schools and the use of Mandarin in *all* those using Chinese. Some urge the establishment of women's medical schools and of postgraduate departments and that the educational standard and conditions of admission to all schools should be uniform.

P. B. C.

[The Chairman of the Research Committee has issued the following letter to the members of the Committee, which explains so clearly his ideas on their work that it is well worth reprinting here].

CHINA M. M. A. RESEARCH COMMITTEE.

TAINAN, FORMOSA,
1st August, 1907.

DEAR DOCTOR:—

I must apologise that, owing to great pressure of work on my return from Shanghai, I have so far failed to write you on the subject of our Research Committee and its work.

The details of what led up to the formation of the committee and of its proposed work are already in your hands. Into a few details I should like to enter more particularly.

I fear that our committee must be regarded, for the present, rather

as a make-shift body, though I believe that if we work together we may succeed in initiating a very useful scheme.

Dr. Hodge expressed very clearly the opinions of myself and I have no doubt of many others, when at the recent meetings he came out so strongly for local branches of the Association. Certainly the Central Chiua Branch is setting us a uoble example of how a branch should be run. And, until the Association becomes regularly subdivided into such branches, I believe that the Research Committee will be greatly handicapped in its work.

My ideal of a Research Committee is one composed of a single member from each of the local divisions of the Association. In lieu of this we have tried to choose men, as far as possible, from each large district, and further propose to add one from each new branch of the Association formed if not already represented on the committee. Our duties, as members of the Research Committee, are :—

First : To stir up an interest in scientific research, and especially along the line we have chosen for this term, among the medicals in our own region.

Second : To gather the results of their work together in a form for publication.

Third : To forward the same at stated periods to me the chairman. About this last, I would add a few words Please understand that the chairman will neither add nor subtract a single word from the reports sent to him for publication, whether from the branches or from the individual members of committee. He will pass them on for publication in the JOURNAL or, should they prove too voluminous for that, in separate pamphlet form. The reason why it is important that reports should pass through the chairman's hands before publication is that he may have the opportunity of reviewing together the reports coming from different provinces of the Empire and so of summarizing the whole of the work done.

Fourth : To help the members near us to solve some of the difficulties which they are sure to meet with, especially in beginning this work, as also any other pathological puzzles they may meet with.

The details of the proposed research work have been already published and I only add that I am anxious, if possible, to have prelimiuary reports from you in December of this year. You may say that it is improbable that by that time much work can have been done. True, still let us be able to announce that we have got to work and that we are determined that the work shall proceed. This will greatly encourage those still lagging behind to fall into line.

Finally, fellow members of the Research Committee, we have started out on a new line of work and we must not, cannot, for the honour of our Association allow it to be a failure. If you have any suggestions for making the committee more effective, or any more names which you think should be added to it, please communicate at once with me and I will circulate such proposals or suggestious among the other members of our committee.

I remain, very sincerely yours,

JAMES L. MAXWELL, *Chairman.*

Medical and Surgical Progress.

Pathological Notes.

Conducted by JAMES L. MAXWELL, M.D.

Extra-corporeal Stages of Herpetomonas and the Leishman-Donovan Body.

The Scientific Memoirs by Officers of the Medical and Sanitary Departments of the Government of India, No. 27, contains a preliminary report by Captain Patton, I. M. S., on the development of the Leishman-Donovan body in the bed-bug, a very important and interesting piece of work and one which may considerably affect the prophylaxis of kala-azar. The rarity of Leishman-Donovan bodies in the peripheral blood was supposed to preclude the chance of insects being intermediary hosts, but Captain Patton shows that in certain cases those parasites occur quite commonly in the polymorphonuclear leucocytes circulating in the peripheral blood. By feeding different insects on such cases he has found that the bodies cannot be recovered from *Pediculus corporis*, *Culex fatigans*, *Anopheles stepensi*, *Stegomyia sugens*, or the tick *Ornithodoros savignyi*, but all the intermediate stages of development and numerous fully developed flagellates, similar to those seen in cultures of splenic blood, may be readily obtained from the mid-gut of the bug.

This is a very decided advance in our knowledge of the extra-corporeal stage of the Leishman-Donovan body, and supports very strongly the original view of Rogers that the bug might act as the intermediary in the spread of the disease. It still remains to be shown whether the flagellate undergoes any further development, and also how it gets back to man when the bug bites again.

We may add that we have received from Captain Patton a preliminary note on the life cycle of a species of *Herpetomonas* found in *Culex pipiens*, which will be published shortly. The interest of the subject lies in the fact that there is a similarity between the developmental forms of the Leishman-Donovan bodies in the bed-bug and those *Herpetomonas* found in mosquitoes. In the hind gut of larvæ of *Culex pipiens*, round and oval parasites with a macronucleus and a micronucleus can be demonstrated, and it is found that they eventually divide longitudinally and develop flagella. In the nymphs or pupæ, by compound division, rosettes may form, and in older nymphs the individuals flagellate and the rosettes begin to break up. In the adult mosquitoes the parasites are seen as elongated spindles, from the anterior end of which a long wavy flagellum protrudes. Captain Patton has also been able to follow some stages in the life-cycle of a species of *Crithidia* in a water-bug. Though some gaps in the cycle still remain to be filled in, enough has been accomplished to show that these two parasites pass their complete cycle in their insect hosts, and are quite distinct from the *trypanosomata* and other blood parasites.—*British Medical Journal*, 29th June, 1907.

From the Annual Report of the Imperial Cancer Research Fund.

It had now been amply demonstrated that the soil was rendered unsuitable for growth :—

(a). When a mouse had recovered from a previous successful inoculation of cancerous tissue of its own species.

(b). When previous inoculation had not been successful, but had led to the absorption of cancerous tissue.

(c). After a previous inoculation of normal mouse blood.

(d). Ill-health in a mouse, in consequence of infective disease, in which, as was well known, digestive activity was depressed, hindered the growth of cancerous tissue when inoculated.

The active agent in inducing the protection, mentioned under (c) was the corpuscle, injections of serum having no effect. On the contrary, the growth of cancer in mice had not been inhibited by inoculating the cancerous tissues or the blood of other species.

They had found that the protection conferred by the spontaneous absorption of tumours which had grown for a time was most efficient against subsequent inoculations of tumour tissue from the same strain as that which had been absorbed. The protection was less for tumours of a different strain, and might even be wanting. The degree of protection against any one strain of tumour was proportional to the amount of that tumour which had been absorbed.

Mice which apparently had been completely protected against the inoculation of cancer had developed the disease spontaneously. Their methods for protecting mice only prevented the grafts from taking, and did not hinder growth once the grafts had taken and organic union with the host had been established. The fact that cancer had developed spontaneously in animals completely protected against the inoculation of grafts pointed to the probability that the organic union between the tumours and the animals attacked was established from the very beginning of the disease. Satsifactory evidence was still wanting of the existence in the serum of protected animals of substances directly harmful to the cancer cell.—*British Medical Journal*, 6th July, 1907.

Progress in Tropical Diseases.

Conducted By J. Preston Maxwell, M.B., B.S., F.R.C.S.

In the *British Medical Journal* of July 20th, 1907, there are two communications, both of which deserve careful attention.

There is first a *résumé* of the report of the Advisory Committee at present inquiring into the problems of plague. In this, the second report, the conclusions are as follows:—

(*a*) Rat plague in the rat is easily recognized *post mortem*, and with a skilled observer microscopical examination is not needed.

(*b*) Rats can be infected by feeding with plague material derived from other dead rats, but the *post mortem* appearances are different from those naturally infected and afford strong evidence that rats in nature are not often infected by feeding.

(*c*) The bubo generally develops in those groups of glands which are in connection with the skin area through which infection takes place.

(*d*) In the matter of plague fleas the followiug are the conclusions:—

1. The average capacity of a rat flea's stomach is approximately 0.5c.mm. On this basis a flea imbibing the blood of a plague rat showing a good septicæmia might take as many as 5,000 germs into its stomach.

2. Multiplication of the plague bacillus takes place in the stomach of the rat flea.

3. The approximate proportion of fleas in the stomach of which multiplication of plague bacilli takes place has been determined, and it has been shown that the proportion varies with the season of

the year, being six times greater in the epidemic season than in the non-epidemic season.

4. Plague bacilli are present in the rectum and fæces of fleas taken from plague rats, and such fæces are infective to guinea-pigs both by cutaneous and by subcutaneous inoculation.

5. On rare occasions plague bacilli have been found in the œsophagus, but never in any other region of the body, such as the body cavity or salivary glands.

6. During the plague season fleas might remain infective for fifteen days after imbibing infective blood, but during the non-epidemic seasou no animal was infective after the seventh day.

7. A single rat flea may transmit the disease.

8. Both male and female rat fleas can transmit the infection.

9. Experimenting with cat fleas (*P. felis*) and human fleas (*P. irritans*), twenty-seven experiments with the former were unsuccessful, and out of thirty-seven experiments with the latter three successes were obtained. Two experiments were made with *C. fasciatus*—both were successful. Multiplication of the plague bacillus takes place in the stomach of the human flea.

10. The plague bacillus has never been seen in the body cavity or in the salivary glands of infected fleas.

Evidence has been obtained to show that the bite of a healthy flea affords a sufficient avenue for infection by septicaemic blood if it is spread upon the bitten part.

No evidence has been obtained in favour of infection by contaminated mouth-parts or regurgitation from the stomach, but the possibility of infection by such means cannot be excluded.

(*e*) With regard to the question of the rat flea and the possibility of its biting man and thus transferring the infection observations were made as quoted below:—

The Commission has made many observations which show that *P. cheopis* will make use of man as a host, and may be captured in large numbers on men in plague-infected houses. The following was one of the methods employed:—

About forty fleas, caught on wild Bombay rats, were placed in a wide-mouthed jar, which had a little sand at the bottom. Twice daily a man's hand and forearm were introduced into the jar and left in for fifteen minutes each time. Fleas which crawled up the forearm were gently pushed back before they could escape. It was observed that the fleas bit readily, and the man himself was soon cognizant of the fact. About every ten days the sand was removed and fresh sand substituted, so that multiplication of the original fleas by breeding was excluded. Five experiments in all were done after this method, with the following result:

Experiment 1. One flea was found alive on the twenty-fourth day.

Experiment 2. One flea was found alive on the ninth day. In this experiment the sand had not been washed, and there was present a fine dust, which by blocking the tracheal openings was probably prejudicial to the lives of the fleas. They were often observed to be dusted over with this material.

Experiment 3. One flea was found alive on the twenty-fifth day.

Experiment 4 One flea was found alive on the twenty-fifth day.

Experiment 5. One flea was found alive on the twenty-seventh day.

From the above experiments it is seen that it was possible to keep rat fleas alive for nearly four weeks by feeding them on human blood. There was a considerable mortality during this time, but the main facts stand out (*a*) that they fed readily on man. and (*b*) that some of them were still alive after twenty-five days.

It may be mentioned that rat fleas kept under similar circumstances, but without food, never survived longer than one week.

The following observations, which were carried out in a building unusually severely stricken with plague, are also of interest in this connexion:—

1. April 17th: 40 fleas were caught on a man who went into one of the rooms for a short time. They were all *P. irritans.*

2. April 18th: 113 fleas were caught on a man who entered one of the rooms. The species were as follows: *P. irritans*, 55; *P. cheopis*, 51; *P. felis*, 7.

3. April 19th: 76 fleas were caught on a man who entered one of the rooms for a short time The species were as follows: *P. irritans*, 40; *P. cheopis*, 34; *P. felis*, 2.

4. April 20th: 80 fleas were caught on a man who entered one of the rooms. The species were as follows: *P. irritans*, 18; *P cheopis*, 60; *P. felis*, 2.

Thus, in three out of four rooms of this chawl, which was badly infected, abundant rat fleas were taken on the legs of men who entered the rooms only for a short time.

The second communication is one from Dr. Wellman of W. Africa.

He claims to have cultivated developmental forms of Filaria pentans in Ornithodoros Monbata (one species of tick).

Development he believes to be complete about the 21st to the 23rd day, though the large forms may be obtained from the tick for at least two months.

His conclusions point to the belief that the cycle is probably direct, from man to tick and from tick back again to man.

Surgical Notes.

Conducted by A. W. TUCKER, M.D.

Loss of vitreous humor in the operation for extraction of cataract. J. M. Ray, *Journal A. M. A.*, July 6th.

The author comes to the following conclusion.

1. Loss of vitreous adds to the danger of primary infection; this danger being irrespective of the amount lost, but depended on the care of preparation of field of operation.

2. The danger of irridocyclitis during the stage of healing is materially increased by the loss of vitreous. The increased activity in the blood vessels and lymphatics during the repair of the traumatism necessary to the operation, being overtaxed, excites changes in the iris and ciliary body that end in a hyalitis, with closing of the pupillary space and anterior phthisis.

3. When vitreous is once lost the material replacing it is probably aqueous, the framework is never reformed and the vitreous become fluid throughout. Floating particles increase in amount as time goes by, fibrillary bands are thrown out from the retina to take the place of the reticulum of the vitreous. These bands contract, causing minus tension and retinal detachments, followed by the characteristic square atrophied eye due to the action of the recti muscles on the softened globe.

The treatment of joint ankylosis by means of transplantation of cartilage. A. R. J. Waglowski, *Zentualblatt für Chirurge*, April, 1907.

Attempts to restore mobility in ankylosed joint have generally failed; hence it is often thought wise to do fixation in good position. Attempts to interpose muscle, fatty tissues and foreign bodies have had poor success.

The author selected a case of ankylosed elbow on which he had previously operated without restoring mobility. The soft parts with the periosteum were mobilized and retracted. He then sawed out a mass which corresponded to a humeral joint surface from the shapeless mass, then a corresponding surface of the ulna and finally freed the head of the radius. He then exposed the cartilages of the 6th and 7th ribs, and removed two strips of cartilage corresponding to the whole length and breadth of the cartilages, but including only half of their thickness. The strips were placed between the two new formed

joint surfaces, with the perichondrium toward the surface. The closely opposed bones kept the strips in place without sutures. The wound heal by first intention, and on the tenth day movements were begun. In four weeks the patient could bend his elbow 60°-70° and had normal pronation and supination.

A second operation of similar nature resulted excellently.

Reports of Local Branches.

KOREA MEDICAL MISSIONARY ASSOCIATION.

The first meeting was held at 8.30 a.m., on September 9th, 1907, in the Seoul Union.

Present: Drs. Avison, Wells, Daniel and Weir.

The meeting was called to order by the convener, Dr. Daniel.

It was *Resolved*, That the members present form themselves into a local branch of the Medical Missionary Association of China.

It was *Resolved*, That the constitution be that of the central Association with the exception of Article 7.

It was *Resolved*, that the Association meet in conference at 8 p.m., on September 9th and 10th, in Dr. Scranton's office.

The adjourned meeting was held in Dr. Scranton's office at 8 p.m., on September 9th, and was called to order by the convener, who was then elected to the chair.

Prayer was offered by Dr. Reid of Song Do.

After a few words of introduction by the chairman, a paper was read by Dr. Weir reporting the conference of the Association at Shanghai in April 1907 and urging those present to join in forming an association.

The following active members were then elected from among those present:—

E. D. FOLLWELL, M.D., American Meth. Epis., Pyeng Yang.

J. W. HIRST, M.D., American Presbyterian, North, Seoul.

WIGHTMAN T. REID, M.D., American Meth. Epis., South, Song Do.

MARY M. CUTLER, M.D., American Meth. Epis., Seoul.

EMMA ERNSBERGER, M.D., American Meth. Epis., Seoul.

MRS. L. B. TAIT, M.D., American Presbyterian, South, Chun Ju.

KATE MCMILLAN, M.D., Canadian Presbyterian, Won San.

W. B. SCRANTON, M.D., Unattached, Seoul.

The constitution was then discussed, and after being amended, was adopted as follows, for one year provisionally:—

THE KOREA MEDICAL MISSIONARY ASSOCIATION.

(Being the Korea branch of the Medical Missionary Association of China.)

CONSTITUTION.

1. That this society be called "The Korea Medical Missionary Association."

2. That it be in affiliation with the Medical Missionary Association of China.

3. That its objects be:—

I. The presentation of the Gospel through the art of healing to the Korean people.

II. (a) The cultivation and advancement of the science of medicine in general

(b) The imparting of a knowledge of the same to the Koreans, through teaching, as well as by the preparation of medical literature in the Korean language.

(c) The promotion of a spirit of mutual helpfulness among the members of the medical profession in this country.

4 All members of the Association must be graduates of some recognised medical college and shall be divided into the following three classes :—

(a) *Active Members*, who shall be engaged in medical missionary work in Korea.
(b) *Associate Members*, being medical practioners eugaged in private practice or medical missionaries engaged in other forms of mission work in Korea.
(c) *Honorary Members*, who shall be such medical graduates as shall be duly elected by the vote of the Association.

Members can be elected at any ordinary meeting of the Association after being proposed and seconded by two members.

5. The officers of the Association shall be a president, vice-president, treasurer and secretary, and shall be elected annually at a general meeting of the Association. The secretary shall send a report of all meetings and the names of all active members on election to the secretary of the Medical Missiouary Association of China.

6. This constitution can only be altered by a three-fourths vote of those present at a geueral meeting of the Association.

The following were unanimously elected officers :—

President, Dr. O. R. AVISON, Seoul.
Vice-President, Dr. J. HUNTER WELLS, Pyeng Yang.
Treasurer, } Dr. H. H. WEIR,
Secretary, } Chemulpo.

It was also decided to appoint an editor, subject to agreement with the editor, of the JOURNAL, and Dr. J. W. Hirst, Seoul, was elected to this post.

The following were also elected members :—

Honorary Member : A. I. LUDLOW, M.D., Cleveland, Ohio.
Associate Member: J. W. NOLAN, M.D., Korea.

The meeting was adjourned and closed with prayer.

The adjourned meeting was resumed at 8 p.m., on September 10th, and after being called to order by the president was opened with prayer.

A paper was then read by Dr. A. I. Ludlow on Some Advauces in Surgery, in which stress was laid on the treatment of abscesses and sinuses by suction and by hyperæmia ; on spinal anæsthesia, and on the preparatiou of the hands, aud urgiug a wide outlook and the observation of new work being done throughout the world. Eight members took part in the discussion.

The following gentleman was elected an active member :—

H. CURRELL, M.B., Australian Presbyterian, Chin Ju.

By-laws were discussed and decided upon as follows :—

BY-LAWS.

1. *Meetings.*—A general meeting shall be held annually at such time and place as shall be decided by the Association.

District meetings may be held in various centres as may be convenient.

A special general meeting shall be called by the officers on the request of not less than eight members after at least one month's notice in writing to every member.

2. All nurses engaged in mission work in Korea shall be entitled to attend all meetings and take part in all professional discussions.

3. Active members shall pay a subscription of one yen annually to the treasurer in addition to the yearly dues of $4 Mex. to the treasurer of the Medical Missionary Association of China, and associate members shall pay a fee of one yen to the treasurer.

4. The following shall be the order of business for each meeting, in the transaction of which Roberts' Rules of Order shall be enforced :—

a. Calling the roll of members.
b. Reading of the Minutes.
c. The election of new members.
d. The election of officers and appointment of permanent committees.
e. Reports of officers and committee.
f. Business arising out of these reports.
g. Unfinished business.
h. New business and written communications.

5. The officers of the Association shall constitute a committee of arrangements which shall provide a programme and make all arrangements for the general annual meeting.

6. These by-laws may be altered or added to by a majority vote at any general meeting of the Association.

Dr. Weir reported the request of the parent Association as to research and asked all members to do what they could to fall in with the suggestion and report to him their results before the end of the year.

It was decided to appoint a number of committees of one each to collect questions and suggestions on various subjects and report at the next meeting.

It was decided that the next meeting be held in Seoul before the meetings of the General Council next year, namely on September 1, 3, 4, 1908. The secretary was instructed to inform the secretaries of the various missions of the date.

Dr. Hirst resigned the post, to which he had been elected, of editor, and Dr. Cutler was elected in his place.

The president nominated the following members to serve on the various committees:—

1. Report blanks and records of patients.	Dr. HIRST.
2. Evangelistic work.	Dr. MCMILLAN.
3. Surgery.	Dr. WELLS.
4. Medicine.	Dr. FOLLWELL.
5. Obstetrics and Gynecology.	Dr. ERNSBERGER.
6. Diseases of children.	Dr. TAIT.
7. Medical education.	Dr. SCRANTON.
8. Nurses' education. (By a nurse.)	Miss SHIELDS.
9. Skin diseases.	Dr. DANIEL.

It was decided that the following districts should be recognized:—

Northwest. As far south as Chai Ryeng.
Central. Seoul, Song Do, Ch'eng Ju, Chemulpo.
Southwest. Kunsan, Chyen Ju, Cong Ju, Coang Ju, Mokp'o.
Southeast. Tai Gu, Fusan, Chin Ju.
Northeast. Won San.

The secretary was directed to send a list of the committees to all members.

Amendment to the Constitution.

It was decided unanimously to add to the end of clause 4 the following words:—

(a) In the interim between meetings, election may be made by circular letter, in which case nomination by two active members shall be made to the secretary, who shall then send one voting paper round all the active members in Korea and shall declare election if the vote is unanimous.

The meeting was closed with prayer.

REPORT OF KULING M. M. A. FOR 1907.

The K. M. M. A. is glad to be able to report progress as to the activity and earnestness of its membership even though the tentative program prepared last year was materially modified by the peculiar providences through which we have been called to pass.

The first meeting was made a decided success by the coming of our honoured friend, Dr. Cousland, who read a paper on the "Past, Present and Future Prospects of the Publication of Medical Works in China." The K. M. M. A. thoroughly appreciates the faithful work of Dr. Cousland and wish him God-speed in his service.

Owing to the deep sense of grief and sympathy which prevailed immediately following the death of Dr. Seabury and Mr. Mann, the second meeting was omitted by common consent.

With something like regularity it has occurred that other important functions have been appointed for Tuesday evenings, and hence the third meeting had a small attendance. It turned out, however that those who did attend had a very profitable meeting. The presenting of interesting cases for consultation and the discussion which followed seemed to appeal to all, and it was suggested that a similar meeting be arranged for next season.

The third session was well attended; there being more than a score of physicians present. Dr. Edward Hume read an able paper on the "Present Problems of Typhoid Fever, Clinical and Scientific." We trust the paper will presently be published when the medical profession of China may share with us the pleasure of examining at leisure this interesting contribution.

The election of officers which followed resulted in the election of four eminent gentlemeu, whose selection will guarantee the success of the Association for the coming year

President, Dr. Thos. Gillison.

Vice-President, Dr. W. A. Tatchell.

Honorary Secretary, Dr. W. E. Somerville.

Treasurer, Dr. E. Hume.

We have reserved to the last to speak of the grief which befel us in the departure of the beloved Dr. Sydney R. Hodge and yet so beautiful and strong was his service upon earth that we assure our hearts in the certainty of his triumphant entrance into the joy of our Lord

GEO. F. DEVOL,
Honorary Secretary.

Correspondence.

In Memoriam.
Sydney R. Hodge, M.R.C.S., L.R.C.P.

EDITOR JOURNAL: Amongst the very numerous tokens of esteem you will be sure to be receiving on all hands of our late friend, Dr. Hodge, who died at Kuling after some months of weakness this summer, may I be allowed to add my quota?

To say that our medical mission cause in China, and especially in Central China, where he lived and worked, has lost a chief, conveys a very poor idea of the regard in which we younger medicals who knew and worked with him were wont to regard him.

It was my privilege to have seen him and seen him at his work in Hankow almost immediately after my arrival in China eleven years ago, and I have never forgotten his strong personality and sympathetic heart from that day to this!

At once the Christian gentleman, the wholesouled physician who lived for his work and his hospital, the tact and genius of his nature made him a great favorite of all who knew him from first to last. The C. C Medical Branch of our Association knew this when more then once it elected him to be its chairman, which post he held at his decease.

Whilst taking a *locum tenens* in Hankow in 1906 and 1907 I was more than once in a tight place, and after consultation with one's confrères, the name of Dr. Hodge invariably cropped up to clench a diagnosis, or appeal to for accurate treatment of a difficult case. He was never too busy to see the Chinese cases we sent along to him, although his own hospital demanded so much of his own time and strength.

In debate at the C. C. branch meetings we "heard" him always with pleasure, and for the sake of seeing his own laboratory and bacteriological research methods it was always a keen pleasure to go to his Wesleyan Mission Hospital for our meetings.

I cannot write much to-day; these few weeks there has been a gap—and a big one—in one's heart which will not be filled by another! God takes away His workmen at all ages and times of their work and service, and it is ours to follow them and obey.

Yours in service,

R. WOLFENDALE.

London Mission,
Chungking, West China.

COMMENT ON SYPHILIS.

EDITOR JOURNAL: The JOURNAL for September has just come into my hands and its contents are such as to call for a few remarks. And one can hardly commence without adding one's quota to the testi-

mony already given of the loss to China of a great and good man.

Dr. Hodge was one whom I personally greatly admired and respected and whose going leaves a blank in our medical missionary ranks.

The papers on syphilis are very interesting. In this part of the country, in spite of the prevalence of all forms of syphilis, aneurism is almost unknown. My own view of the case is that aortic aneurism at least depends on three causes working together—syphilis, alcohol and the circulation in the blood of the products of the excessive consumption of butcher's meat. Strain may be the determining factor, but is not the cause. I have yet to meet a case of aneurism in this region and only know of one or two having been recorded.

Chinese doctors undoubtedly use *mercury*, and I have had several cases under my care of serious salivation brought about in this way. There is no evidence in this region that they know anything about the value of the *iodides*.

And it must be remembered in calculating the results of syphilis on the life of a nation that the mortality of unborn children is frightful. Again and again I meet cases who have had three, four, and five abortions from this cause, and a great many of the children born of syphilitic parents at full term die soon after birth.

Secondly, the question of attenuation of virus must be taken into account in the question of the subsequent history of these syphilitic cases. While I have seen cases as severe in their destruction of tissue as any of the old museum specimens at home, in many cases the subsequent history of an untreated case of syphilis is not what one would expect.

With regard to its effects on the nervous system undoubtedly these are rare. Locomotor ataxia is almost unknown on this region. But here again one seems to be dealing with a complex cause.

In the locomotor ataxia cases of Western lands, probably it is rare to find a case that has not at some time or other taken a fair amount of alcohol, even though they may not in any sense be drunkards. And the rush and strain of Western life has not yet penetrated this land to any great extent.

I am, yours, etc.,
J. PRESTON MAXWELL.

ENGCHHUN, Amoy,
October 15th, 1907.

THE PATENT MEDICINE EVIL.

EDITOR JOURNAL: Has the C. M. M. A. ever taken any action toward warning the Chinese government of the evils of the importation and use of patent medicines? The Chinese are sure to "swill" millions of dollars worth of either inert or harmful trash and enrich the patent medicine vendors. China will be a great field for exploitation. I shall be glad to know if something has been done, and if not yet, whether action could be taken.

Thanking you in advance, I am,

Yours very sincerely,
CHAS. W. SERVICE.

KIATING, Szchuan,
September 12th, 1907.

P. S. — Congratulations on the July number of the CHINA MEDICAL JOURNAL. It is capital I think.

ANKYLOSTOMIASIS.

EDITOR JOURNAL: In reading the No. 4 of the CHINA MEDICAL JOURNAL my eye fell on the remarks made by James L. Maxwell, M.D., on certain cases of anæmia which he had found to be cases of ankylostomiasis. So I asked myself: "Have you also failed in your duty in those cases? I also have seen here

in my work, being since July, 1906, here in Chungking as physician to the Imperial German Consulate many cases as pictured by Mr. Maxwell and have vainly tried to help them. Aud only a few weeks afterwards I got the proof that I have been wrong, very often perhaps, in treating such cases as malarial. I found in two cases of anæmia, œdema, ascites the eggs of ankylostomum. As neither Dr. McCartney nor Dr. Wolfendale told me anything about ankylostomiasis here, so it may be perhaps useful for the gentlemen and ladies on work in Szechuan to know that ankylostomum is found in Chungking.

I enclose a small tube containing some female worms in *glycerin* and hope they will arrive in good condition to be recognized as such. Two male worm I found I kept for demonstration.

Dr. Wolfendale, London Mission Hospital, encouraged me to send this notice to the JOURNAL as a small grain, contributed to the heap of knowledge to be collected by the medical men in China.

Hoping that you will excuse the trouble with my interest in the object.

I am, Dear Sir,

Yours very faithfully,

Dr. ASSMY,

Surgeon in the German Army.

CHUNGKING,

October 5th, 1907.

METHODS OF MISSIONS.

By the Rev. LORD WILLAIM GASCOYNE-CECIL.

The fifth method is, perhaps, the most attractive to the onlooker. Medical missions have done a stupendous work in China; more than any other form of missions they have shaken the prejudice against the West. We saw many of these missions, all well appointed. Perhaps the one that impressed us most was that of Dr. Main at Hangchow. He has established such a position in that city that when one walks round the vast city of Hangchow with him, one finds it hard to believe that Europeans were ever unpopnlar in China; and when one enters his leper refuge and sees the happy smiles of welcome on the faces of the poor sufferers, one understands the reason of his popularity. The Mandarin Che Tseng, who spoke excellent French, and who was in charge of the questions that concern foreigners in this province, told us that there was no friction in that city with Protestant missions—which I suggest is owing to Dr. Main's influence. But I feel it is invidious to mention any one hospital as excellent; for all we saw, and we saw fifteen, were excellently managed. At Shanghai we met the members of the Medical Missionary Conference; they all pleaded for more nurses to help to train the Chinese women in the science of nursing. They also urged that hospitals should be better staffed and that more medical

schools should be started, and told us how intelligent and efficient their Chinese pupils were as operators, in spite of the great disadvantage in which they were placed owing to the objection the Chinese have to dissection; at Jessfield, as illustrating this point, they have to point out to the student that the skeleton in the laboratory has a high nose-bone and therefore could not be a Chinese; otherwise they would be afraid of touching it for fear of being haunted. The English as opposed to the American missions wanted money. Whatever faults the Americans have as a nation, generosity is certainly one of their virtues. Perhaps I might mention the Women's Hospital at Canton, of the American Presbyterian Female Medical Mission, as an example of American generosity and efficiency. It was also very interesting as an instance of how much can be done to help the women of China by training native women as doctors. When we visited the hospital, Miss Fulton, M.D., was unfortunately ill, but her place was well filled by Miss Lunn, a Chinese lady doctor, who spoke English admirably. She took us round the hospital, looking most professional in her national dress, which in Canton consists of a black coat and trousers. She told us how gladly her compatriots welcomed her skill, and how necessary it was in China for women to be attended by women.—From *The Times*.

Personal Record.

MARRIAGE.

At Wuhu, China, October twenty-sixth, 1907, Dr. Edgerton Haskell Hart to Caroline, daughter of Mr. and Mrs. Horace Herbert Maddock.

INDICES
TO
The China Medical Journal.

Vol. XXII, 1908.

INDEX I. GENERAL.

INDEX II. AUTHORS.

List of Members

OF THE

Medical Missionary Association of China.

ACTIVE MEMBERS.

Date of Arrival.	*Name.*	*Society.*	*Station.*
1907	Adkins, Russel E., M.D. (U. of Penn.)	A.B.M.U.	Swatow.
1902	Aitken, Miss I., L.R.C.P. & S.	U.F.C.S.	Liaoyang.
1906	Allan, Frank F., M.D. (Denver)	C.M.M.	Penghsien, Chengtu.
1908	Anderson, Miss Esther, M.D. (Ohio Med. U.)	A.P.M.	Soochow.
1889	Anderson, John A., M.D.	C.I.M.	Taichowfu, Chekiang.
1878	Anderson, Peter, L.R.C.P. & S.	E.P.M.	Takow, Formosa.
	Anderson, Robert A., A.M., M.D. (Rush.)	Hauge's Syd.	Fanchang, Hupeh.
	Anderson, William J. Webb, M.D., CH.B. (Leeds) M.B. (Victoria, Manch.)	Wesleyan	Fatshan.
1905	Aspland, William Harold Graham, M.D., C.M. (Toronto), M.R.C.S. (Ed.), L.R.C.P., M.R.C.S. (Eng.) (韓濟京)	Ch. of Eng.	Peking.
1893	Avison, Oliver R., M.D., C.M. (Victoria & Toronto) "Severance Hospital"	S.P.M.	Seoul, Korea.
1905	Ayers, T. W., M.D.	S.B.C.	Hwanghsien via C'foo.
	Baldwin, Jesse H., M.D. (U. of Kansas.)	M.E.M.	Taianfu, Shantung.
	Balme, Harold, F.R.C.S. (Eng.)	E.B.M.	Taiyuanfu, Shansi.
1908	Barlow, C. Heman, M.D. (North-west.)	A.B.M.U.	Huchow.
1901	Barrie, Howard Green (白來), M.D. (Trinity, Canada)	C.I.M.	Kuling.
1903	Baxter, Alexander Kidd (巴施德), M.B., CH.B. (Ed.)	E.M.M.	Yungpingfu, Chihli.
1902	Beam, Albert J., M.D.	Ref. Ch. in U.S.	Yochow, Hunan.
1905	Beath, Miss Nina H. (麥), M.B., CH. B. (Ed.)	E.P.M.	Swatow.
1907	Beatty, Miss Elizabeth, L.R.C P. & S.	I.P.M.	Kuangning, M'churia.
	Beatty, John Colley Pounder, M.B., B.CH. (Dublin)	C.M.S.	Hangchow
1884	Beebe, Robert C. (比必), M.D.	M.E.M.	Nanking.
1903	Behrents, O. S., M.D.	Am. Luth.	Juning, Honan.
1899	Bement, Miss Lucy P. (庇), M.D.	A.B.C.F.M.	Shaowu, via F'chow.
1890	Benn, Miss Rachel (邊), M.D.	M.E.M.	Taianfu, Shantung.
1899	Berkin, Mrs. John (*nee* Leila Doolittle) M.D. (Woman's Med. School, Penn.) (甘)		Kuling, Kiangsi.

Date of Arrival.	*Name.*	*Society.*	*Station.*
1907	Berst, William L. (畢爾慈), M.D. (U. of Penn.)	A.P.M.	Changteh.
1904	Betow, Miss Emma J. (美德信) M.D. (South-western Homeopathic) "Margaret Eliza Nast Mem'l"	M.E.M.	Sienyu, Fukien.
1892	Bigler, Miss R. M. (碧), M.D.	U.B. in C.	Canton.
1906	Blair, Charles E., M.B., CH. B. (Ed.)	L.M.S.	Tingchowfu, Amoy.
1892	Bliss, E. L. (福), M.D.	A.B.C.F.M.	Shaowu, Foochow.
	Boggs, Mrs. J. J. (*née* Ruth Bliss), M.D.	A.P.M.	Canton.
1880	Boone, Henry W. (文亨利) M.D. (U. of N. Y.) "St. Luke's"	A.P.E.M.	Shanghai.
1899	Booth, Robert T. (濮) M.B., CH.B. (R.U.I.) D.T.M. (Cantab.)	W.M.S.	Hankow.
1899	Boyd, H. W., M.D.	A.P.M.	Canton.
1899	Bradley, J. W., M.D.	S.P.M.	Sutsien, via C'kiang.
1906	Bragg, Thomas (實羅恩), L.R.C.P. & S.	L.M.S.	Weichun, Shuntehfu.
1905	Bretthauer, Miss Emilie, B.D., M.D.	A.B.M.U.	Hanyang, via H'kow.
	Broomhall, Benjamin C., F.R.C.S., L.R.C.P. (Eng.)	E.B.M.	Taiyuanfu, Shansi.
	Bryan, Herman C., M.D.	A.P.M.	Nodoa, Hainan.
	Bryson, Mrs. A. G. (*née* Lenwood), M.B., CH.B. (Ed.)	L.M.S.	Tsangchow, Chihli.
1904	Bryson, Miss Margaret Edith, M.B., CH.B. (Glasgow)	E.P.M.	Chuänchowfu.
1891	Butchart. James (梅), M.D.	F.C.M.	Luchowfu, via Wuhu.
1907	Byles, Miss Hilda M., M.B., B.S. (London)	L.M.S.	Hankow.
1903	Bynon, Miss Margaret Hughes, M.D. (Wom. Med., Phil.)	A.P.M.	Weihsien, Shantung.
1891	Canright, H. L. (甘), M.D.	M.E.M.	Chengtu, Sze.
1887	Carleton, Miss M. E. (蘭), M.D.	M.E.M.	Mingtsinghsien.
	Carr, John C., M.D., F.R.C.P. (Ed.)	C.I.M.	Pingyangfu, Shansi.
1901	Carr, Sydney Herbert, M.D., M.R.C.P. (Ed.)	C.I.M.	Kaifeng, Honan.
1891	Case, J. Norman (祈), M.D.		Weihaiwei.
1898	Cattell, Miss Frances F. (高), M.D. (Wom. Med. Col. of Penn.) "Tooker Memorial"	A.P.M.	Soochow.
1901	Charles, M. R., M.D.	M.E.M.	Nanchang, Kiangsi.
1882	Christie, Dugald (司督陽), F.R.C.P., L.R.C.S. (Ed.) "Moukden Hospital"	U.F.C.S.	Moukden.
1904	Churchill, Herbert Melville, M.R.C.S., L.R.C.P. (London). (慧惟善), "C.M.S. Hospital"	C.M.S.	Kienningfu, F'chow.
1902	Clark, Walter Thomas, M.D. (Western U. London, Ont.) (賴宏恩)	C.I.M.	Talifu, Yunnan.
1902	Clift, Harry Lechmere, M.D., CH. B. (Ed.) (祁理扶)	Emmanuel Med. Mis.	Nanning, Kwangsi.
1899	Cochran, Samuel, M.D. (Phys. & Surg., N.Y.)	A.P.M.	Hwaiyüan An.
1897	Cochrane, Thomas (柯), M.B., C.M. (Glas.)	L.M.S.	Peking.
1905	Cole, Alfred F., M.R.C.S., L.R.C.P. (Eng.)	C.M.S.	Ningpo.
1899	Cooper, Miss Effie B., M.D. (Wom. Med. Cincin)	A.P.M.	Tsingtau.
	Cooper, Miss F. M. (嘆), L.S.A.	C.E.Z.M.	Loyüanhsien, F'chow
1906	Corlies, Miss Anna Evans, M.D. (Wom. Med. Col. of Pen.)	A.B.M.U.	Yachowfu, Sze.

Date of Arrival.	*Name.*	*Society.*	*Station.*
1890	Cormack, James G. (柯), L.R,C.S. & P.	L.M.S.	Hankow.
1883	Cousland, Philip Brunelleschi, M.B., C.M. (Ed.) (高似蘭)	E.P.M.	Shanghai.
1888	Cox, George A. (計), L.R.C.P. & S.	C.I.M.	Chinkiang.
1903	Cox, James Ralph (康德昭), M.D., C.M. (McGill) "Jenshow Hospital"	C.M.M.	Jenshow, Sze.
1908	Crawford, Wallace, M.D., C.M. (West U., Ld. Ont.)	C.M.M.	Penghsien. Szechuan
1902	Crooks, Miss Emma M., M.B., CH.B., B.A.O. (Royal U. Ire.)	I.P.M.	Kirin.
1907	Cundall, Edward, M.B., CH. B. (Vict.)	W.M.S.	Hankow.
	Cutler, Miss Mary M., M.D.	M.E.M.	Seoul, Korea.
	Currell, H., M.B.	Australian Pres.	Chinju, Korea.
	Daniel, T. H., M.D.	A.P.M.	Kunsan, Korea.
1889	Davenport, Cecil J., F.R.C.S., L.R.C.P (Eng.) "Shantung Road Hospital"	L.M.S.	Shanghai.
1901	Davidson, William Henry, M.R.C.S., L.R.C.P. (Eng.)	F.F.M.	Tungchwan Sze.
1907	Davies, Arnold (戴維恩), M.B., CH. B. (Ed.) "Roberts Memorial"	L.M.S.	Tsangchow, Chihli.
1900	DeVol, George F., M.D. (Phys. and Surg., N.Y.)	Am. F.M.	Nanking.
1900	DeVol, Mrs G. F. (*née* Isabella French), M.D.	Am. F.M.	Nanking.
	Dipper, E., M.D. "Faber's Hospital"	Gen' Ev. Prot. Mis.	Tsingtau.
1897	Dobson, W. H., M.D.	A.P.M.	Yeungkong, Canton.
1895	Dow, Miss Jeanie (舒), M.B., C.M.	C.P.M.	Changte Ho.
	Draper, Frances L., M.D. (Chic. Hom.)	M.E.M.	Singiu, Fukien.
1901	Edmonds, Miss A. M., M.D. (Chicago.)	M.E.M.	Chungking.
1882	Edwards, E. H. (葉), M.B., C.M. (Ed.)	E.B.M.	Taiyuanfu, Shansi.
1906	Eich, Gottlieb Ludwig Friedrich, M.D. (Marburg) "Tungkun Hospital" (愛場康)	Rhenish M.	Tungkun, Canton.
1904	Ellerbek, Soren Anton (安樂克), M.B., CH.B. (Ed.) "Danish Mission Hospital"	Dan. Luth.	Antung, Manchuria.
1904	Ensign, Charles F., M.D. (Phys. & Surg., Kans.)	M.E.M.	Taianfu, Shantung.
	Ernsberger, Miss Emma, M.D.	M.E.M.	Seoul, Korea.
1900	Eubank, M. D., M.D.	A.B.M.U.	Huchow.
1901	Evans, Philip S., Jr., M.D.	S.B.C.	Yangchow.
	Ewan, R. B. (余), M.D., C.M.	C.M.M.	Chengtu.
1887	Fahmy, A. (巴), M.B., C.M. (Ed.)	L.M.S.	Changchowfu. Amoy.
1895	Fearn, J. B., M.D.	M.E.M.	Shanghai.
1895	Fearn, Mrs. J. B., M.D.	M.E.M.	Shanghai.
	Ferguson, J. Young, M.A., M.D., C.M. (Q. Col. Can.)	C.P.M.	Tamsui, Formosa.
1898	Fleming, Miss Emma Elva, M.D. (Chicago)	A.P.M.	Ichowfu, Shantung.
	Follwell, E. D., M.D.	M.E.M.	Pyengyang, Korea.
1899	Fowler, Henry (傅樂仁), L.R.C.P. & S.	L.M.S.	Siaokan, Hupeh.
1905	Fouts, Frederick, M.D. (法福德) (John Creighton Med. Col., Omaha) "Ichowfu Men's Hospital"	A.P.M.	Ichowfu.
1905	Freeman, Claude Wesley, M.B., B.S. (Toronto) (裴) "Chungking Gen'l Hosp. for Men"	M.E.M.	Chungking.

Date of Arrival.	*Name.*	*Society.*	*Station.*
1908	Fullerton, Miss F. C., M.D. "St. Elizabeth's"	A.P.E.M.	Shanghai.
1884	Fulton, Miss Mary H., M.D. (Med. Col. of Penn.) "David Gregg Hospital for Women and Children, etc."	A.P.M.	Canton.
1893	Garner, Miss Emily (賈), M.D.	W.U.M.	Shanghai.
1892	Gaynor, Miss Lucy A., M.D.	Am. F.M.	Nanking.
1897	Gibson, Robert Maclean (葉) M.B., C.M. (Ed.) "Alice Memorial Hospital, etc."	L.M.S.	Hongkong.
1900	Gillespie, John R., M.B., B. CH. (R.U.I.)	I.P.M.	Moukden.
1882	Gillison, Thomas (祁), M.B., C.M. (Ed.)	L.M.S.	Hankow.
1892	Gillison, Mrs. T. (*née* Hart), L.R.C.P. & S.	L.M.S.	Hankow.
1898	Glenton. Miss Mary Vernon, M.D. (N'western U., Ill.) (甘福南) "Elizabeth Bunn Memorial"	A.P.E.M.	Wuchang.
1885	Gloss, Miss A. D. (葛), M.D.	M.E.M.	Peking.
1903	Goddard, Francis Wayland (高), M.D.	A.B.M.U.	Shaohingfu, Ningpo.
	Goldsmith, A. W., M.B., CH. B. (Trinity, Dublin)	C.M.S.	Funingfu, Fukien.
1893	Gordon, Robert John, M.B., B. CH., B.A.O. (R.U.I.) (丁滋博)	I.P.M.	Kwanchengtze.
1896	Gotteberg, Mrs. J. A. O. (R.B.), M.D., (Wom. Med. N.Y.) (戈)	Nor. M.S.	Changsha.
1901	Graham, Andrew, L.R.C.P. & S.	C. Scot. M.	Ichang.
1906	Grandin, Miss Lilian Mary, L.R.C.P. & S. "Sunshine Terrett Hospital"	U. Meth. Mis.	Chaotung, Yunnan.
1888	Grant, J. S. (藍), M.D.	A.B.M.U.	Ningpo.
1892	Greig, James A. (高), F.R.C.S., L.R.C.P. (Ed.)	I.P.M.	Kirin.
	Grierson, Robert, M.D. (Halifax)	C.P.M.	Songchin, Korea.
1897	Guinness, Gershom Whitfield, B.A., M.B., B. CH. (Cantab.) (金) "C.I.M. Hospital"	C.I.M.	Chenchow, Honan.
1883	Hager, Charles Robert, M.D. (Vanderbilt U., Tenn.) (喜嘉理)	A.B.C.F.M.	Hongkong.
	Hall, Asa Z., M.D.	A.B.M.U.	Ningyuanfu, Sze.
1906	Hall, Francis J., M.D. (Johns Hopkins)	A.P.M.	Peking.
	Hall, J. A., M.D., C.M. (U. of Manitoba)	A.P.M.	Iloilo, P. I.
	Hall, Mrs. Rosetta Sherwood, M.D.	M.E.M.	Pyengyang, Korea.
1906	Hamilton, Miss Annie J., M.D.	W.U.M.	Shanghai.
1903	Hanington, Miss Mabel Louise (韓), M.B. (Toronto), M.D., C.M. (Trinity)	C.M.S.	Ningteh, Fukien.
	Harris, Miss Lucy Elizabeth, M.B. (London)	F.F.M.	Tungchwan, Sze.
1893	Hart, Edgerton Haskell, M.D (U. of N.Y.) (赫懷仁) "Wuhu General Hospital"	M.E.M.	Wuhu.
	Hatfield, Miss Lena, A.B., M.D. (C. Ph.&S., Chic.)	M.E.M.	Foochow.
	Hayes, Charles A., M.D. (U. of S. Cal.)	S.B.C.	Wuchow.
	Hayes, Mrs. Alice J., M.D., (U. of S. Cal.)	S.B.C.	Wuchow.
1907	Hearn, T. O., M.D. (Maryland Med. Col.)	S.B.C.	Pingtu.
1903	Hemingway, Willoughby A., M.D. (Rush.) (韓明衛) "Taiku Congregational Hospital"	A.B.C.F.M.	Taikuhsien, Shansi.
	Henry, Miss A., M.D.	C.M.M.	Chengtu.
1899	Hewett, J. W. (許), M.R.C.S., L.R.C.P. (Eng.)	C.I.M.	Suitingfu, Sze.

Date of Arrival.	*Name.*	*Society.*	*Station.*
	Hills, Oscar F., M.D. (Univ., Penn.)	A.P.M.	Chefoo.
	Hirst, J. W., M.D.	A.P.M.	Seoul, Korea.
1872	Hoag, Miss Lucy (賀路綏), M.D.	M.E.M.	Chinkiang.
1894	Hogg, Alfred, (霍) M.D., C.M. (Aberdeen)	C.I.M.	Chefoo.
1885	Hopkins, N. S. (賀), M.D.	M.E.M.	Peking.
1896	Horner, Miss Mary C., L.R.C.P. & S.	U.F.C.	Moukden.
1899	Hotvedt, Ingvald M. J., M.D. (U. of Mich.) (洪德義)	Hauge's Syn.	Fancheng, Hupeh.
	Houghton, Henry S., PH.B., M.D. (Johns Hopkins)	M.E.M.	Wuhu.
1905	Hume, Edward Hicks, M.D. (Johns Hopkins) (胡美) "Yale Mission Hospital"	Yale	Changsha.
1895	Eng, Miss Hu King (許金驚), M.D. (Wom. Med. Col. of Penn.) "Woolston Memorial"	M.E.M.	Foochow.
1889	Huntley, George Arthur John, M.D. (U. of Vermont) (雷盛休)	A.B.M.U.	Hanyang.
1887	Ingram, J. H. (盈), M.D. (U. of Penn.)	A.B.C.F.M.	Tungchow Chi.
1904	Jenkins, Herbert Stanley, M.D. (Lond.) F.R.C.S. (Eng.) (姜感思)	E.B.M.	Sianfu.
1901	Jefferys, William Hamilton, M.D. (U. of Penn.) (吉福來) "St. Luke's"	A.P.E.M.	Shanghai.
1889	Johnson, Charles F. (章), M.D.	A.P.M.	Ichowfu.
1898	Jones, A. Fletcher (仲), L.R.C.P. & S.	E.M.M.	Ningtsing, Tientsin.
1905	Jones, John, M.R.C.S., L.R.C.P. (Lond.)	U.M.F.C.	Ningpo.
1896	Judd, Frederick Hudson, B.A., M.B., B.CH. (Cantab & Lond.) (祝康寧)	C.I.M.	Jaochow, Kiangsi.
	Kahn, Miss Ida, M.D.	M.E.M.	Nanchang, Kiangsi.
1903	Keeler, Joseph Leonard, M.D. (N.Y. Homeo.) "Martyr's Memorial"	M.E.M.	Changli, Chihli.
1898	Keers, Mrs. John (*née* McMordie), L.R.C.P.&S.	I.P.M.	Chinchowfu, Newchwang.
1897	Keller, Frank A. (葛), M.D. (U. of N.Y.)	C.I.M.	Changsha.
1899	Kelly, William, M.D. (Nashville)	Ref.Ch.in U.S.A.	Chenchow, Hunan.
1895	Kember, Arthur T., F.R.C.S. (Eng.)	C.M.S.	Hangchow.
1888	Ketring, Miss MaryE., M.D. (Wom.Med.Col.N.Y.) (梁美利) "Gamble Memorial"	M.E.M.	Chungking.
1891	Kilborn, Omar Leslie, M.D. (Queen's U., Kingston, Canada) (啓邁德)	C.M.M.	Chengtu.
	Kilborn, Mrs. O. L., M.D.	C.M.M.	Chengtu.
1889	Kinnear, H. N. (金), M.D.	A.B.C.F.M.	Foochow.
1907	Kirk, John, M.B., CH. B. (Ed.)	New Zealand Presb.	Canton.
1902	Kirkwood, Thomas, M.B., C.M. (Glasgow)	L.M.S.	Tientsin.
	Koons, Miss Sue L., M.D. (U. of Ill.)	M.E.M.	Taianfu, Shantung.
1906	Krumling, F. C., M.D.	Ev. Assoc. of N. Am.	Chenchow, Hunan.
1889	Kühne, John E. (楠), M.D.	Rhenish M.S.	Tungkun.
	Lait, Mrs. L. B., M.D.	S.P.M.	Chunju, Korea.
1895	Landsborough, David (蘭), M.B., C.M. (Ed.)	E.P.M.	Tainan, Formosa.
	Lasell, Sydney L., M.D.	A.P.M.	Kachek, Hainan.

Date of Arrival.	*Name.*	*Society.*	*Station.*
1905	Laycock, Albert Penard, M.B., CH. B. (Cantab) M.R.C.S., L.R.C.P. (Eng.)	C.I.M.	Kaifeng.
1904	Layton, E. A., M.D.	F.C.M.	Nanking.
1906	Lee, Claude M., M.D.	A.P.E.M.	Wusih.
1895	Lee, Miss Venie J., M.D.	S.P.M.	Hangchow.
1895	Leonard, Miss Eliza E. (藍), M.D. (U. of Mich.)	A.P.M.	Peking.
1897	Leslie, Percy C. (雷), M.D., M.R.C.S.	C.P.M.	Changte Ho.
	Lewis, Charles, M.D.	A.P.M.	Paotingfu.
	Lewis, Miss Elizabeth F., M.D. (U. of Penn.)	A.P.M.	Paotingfu.
1902	Lewis, Stephen C. (柳威士), M.D. (U. of Penn.)	A.P.M.	Chenchow, Hunan.
	Li Bi Cu, M.D. (Phil Women's M. C.)	M.E.M.	Ngucheng, Foochow
	Lincoln, Charles S. F., M.D.	A.P.E.M.	Shanghai.
1896	Livingstone-Learmonth, Basil Lockhart, M.B., C.M. (Ed.) (李衛仁)	I.P.M.	Sinminfu, Manchuria.
	Livingstone-Learmonth, Mrs. A. M., M.B., CH.B. (Ed.)	I.P.M.	Sinminfu.
1897	Logan, Oliver Tracy (羅感恩), M.D. (Med. Col. of Indiana A. "Sunday School Hospital"	A.P.M.	Changteh, Hunan.
	Louthan, A. D., M.D. (U. of Virginia.)	S.B.C.	Chenchowfu, Ho.
1894	Lowry, George Davis N. (劉廣仁), M.D. (Phys. & Surg., N.Y.)	M.E.M.	Peking.
1879	Lyall. Alexander (來愛力), M.B., C.M. (Ed.)	E.P.M.	Swatow.
1901	Lyon, Charles Hodge, M.D.	A.P.M.	Tsining, Shantung.
1891	Lyon, Miss Ellen M. (萬), M.D. (Wom. Med., Chicago) "Liang-an Women's and Children's Hospital"	M.E.M.	Foochow.
	MacBean, Jessie A., M.D. (Toronto)	C.P.M.	Kongmoon.
	Macdonald, John A, M.D., C.M.	C.M.P.	Kongmoon.
1889	Machle, E. C. (麻), M.D.	A.P.M.	Canton.
	Mackenzie, Marcus (瑪), M.A., M.B., C.M. (Ed.)	C.M.S.	Foochow.
	Mackey, Maud Aura, M.D. (Col. Med., U. of S. Cal.)	A.P.M.	Paotingfu.
1886	Macklin, W. E. (馬), M.D.	F.C.M.	Nanking.
1902	MacWillie, John, M.D., C.M. (Trinity, Toronto) (馬毅夏) "St. Peter's"	A.P.E.M.	Wuchang.
1881	Main, David Duncan, F.R.C.P., L.R.C.S. (Ed.) (梅滕更)	C.M.S.	Hangchow.
1891	Marshall, F. W. (馬), L.R.C.P. & S.	E.M.M.	Laoling.
1899	Massey, Miss Ruth, M.B., B.S. (Lond.)	L.M.S.	Wuchang.
1892	Masters, Miss L. M. (明), M.D.	M.E.M.	Foochow.
1901	Maxwell, James Laidlaw (馬), M.D., B.S. (Lond.)	E.P.M.	Tainan, Formosa.
1899	Maxwell, John Preston, M.B., B.S., F.R.C.S. (Lond.) (馬士敦)	E.P.M.	Yungchun, Amoy.
1898	McAll, P. Lonsdale (馬), M.B., CH. B. (Ed.)	L.M.S.	Hankow.
	McBurney, Jean C., M.D. (W. Med. C. of Pa.)	Ref. Pres. M.	Takhing.
	McBurney, Katē W., M.D. (W. Med. C. of Pa.)	Ref. Pres. M.	Takhing.
1885	McCandliss, H. M. (康), M.D.	A.P.M.	Kiungchow, Hainan.
1890	McCartney, James H., M.D. (Western Reserve) (馬嘉禮)	M.E.M.	Chungking.
1888	McClure, William (羅威靈), M.D., C.M. (McGill)	C.P.M.	Weihwei, Honan.

Date of Arrival.	*Name.*	*Society.*	*Station.*
	McCracken, Josiah C., M.D. (U. of Penn.)	Canton Med. Col.	Canton.
1906	McDonald, John Alexander, M.D., C.M. (McGill)	C.P.M.	Kongmoon, Canton.
	McKean, J. W., M.D.	A.P.M.	Chengmai, Siam.
	McMillan, Miss Kate, M.D.	C.P.M.	Wonsan, Korea.
1906	McMurtry, Shirley O., M.B., C.M. (McGill)	C.P.M.	Weihwei, Honan.
	McNeill, Miss Margaret Elizabeth, L.R.C.P. & S., M.B., CH. B. (Glasgow)	I.P.M.	Kwangchengtze.
1883	McPhun, John Finlay (彭), M.B., C.M. (Glasgow)	E.P.M.	Samhopa, Swatow.
1904	Meadows, J. G., M.D. (Nashville)	S.B.C.	Wuchow.
	Meadows, Mrs. Dorcas F., M.D. (Nashville)	S.B.C.	Wuchow.
1905	Menzies, J., M.D.	C.P.M.	Hwaikingfu, Honan
1905	Merwin, Miss Caroline S., M.D. (U. of Calif.)	A.P.M.	Tsinanfu, Shantung.
1906	Miller, Miss Eliza Jane, M.B., CH. B. (Glasgow)	U.F.C.S.	Moukden.
1904	Montgomery, John Howard, M.B., CH. B. (Ed.) (滿約翰)	E.P.M.	Changpu.
1905	Mitchell, Miss J. D., M.B., CH. B. (Glas.)	I.P.M.	Fakumen.
1904	Mitchell, J. E. (李灼機), M.D., C.M. (McGill)	L.M.S.	Poklo, Canton.
1904	Morgan, Lorenzo B., M.D. (Johns Hopkins)	S.P.M.	Tsingkiangpu.
1904	Morgan, Mrs. Ruth B., M.D. (Johns Hopkins)	S.P.M.	Tsingkiangpu.
1886	Morley, Arthur (毛), L.R.C.P. & S.	W.M.S.	Teian, Hupeh.
1898	Myers, Miss Angie M., M.D. (Wom. Med. Col., N. Y.) "St. Elizabeth's"	A.P.E.M.	Shanghai.
1896	Muir, David T. (穆), M.B., C.M. (Ed.)	U.F.C.S.	Tieling, Manchuria.
1883	Neal, James Boyd (聶), M.D.	A.P.M.	Tsinanfu.
1904	Newell, Miss Mary, M.D. "Margaret Williamson"	W.U.M.	Shanghai.
1882	Niles, Miss Mary West (樓), M.D.	A.P.M.	Canton.
	Nilsen, Jorgen Edvin, M.D. (Christiania)	Nor. Mis.	Yiyang, Hunan.
1902	O'Donnell, Miss Florence M., M.D., C.M. (Dalhousie)	C.M.M.	Chengtu.
	Oldt, Frank, M.D.	U.B. in C.	Canton.
1898	Olpp, Gottlieb Friedrich Adolf, M.D. (Munich) (安其生) "Tungkun Hospital"	R.M.S.	Tungkun.
1898	Osgood, Elliott I., M.D. (師顧德) (Cleveland Col. of Phys. & Surg.)	F.C.M.	Chuchow An.
1887	Otte, J. A. (懿), M.D.	Ref. Ch. in Am.	Amoy.
1897	Pakenham, H. R. (白), M.B., B. CH. (Dublin U.)	C.M.S.	Kienningfu, Fukien.
1894	Palmborg, Miss Rosa W., M.D. (Hahnemann, Chicago) (柏醫生)	7th Day Bap.	Shanghai.
	Pantin, Miss Mabel, L.S.A.	C.E.Z.M.	Pingnan, Foochow.
	Parish, R., M.D. (Indiana)		Manila P. I.
1882	Park, William Hector, M.D. (Bellevue, N. Y.) (楠樂文)	M.E.M.S.	Soochow.
1884	Parry, Herbert M.R.C.S., L.R.C.P. (Eng.)	C.I.M.	Chentu, Sze.
1908	Paterson, James Lee Hamilton, M.B., CH. B. (Ed.) (巴)	L.M.S.	Shanghai.
1892	Paterson, Thomas C. (巴), M.B., C.M. (Ed.)	E.B.M.	Tsowping, Shantung.

Date of Arrival.	*Name.*	*ociety.*	*Station.*
1891	Patterson, Mrs. B. C., M.D. (Wom. Med. Col., Baltimore)	S.P.M.	Sutsien.
1905	Patton, Mrs. C. E. (*nee* Mack) M.D. (Women's Col., Penn)	A.P.M.	Yuenkong.
1899	Peake, Ernest C. (貝寶德), M.B., CH. B. (Ed.)	L.M.S.	Hengchowfu, Hunan.
	Peill, Ernest John (潘), M.B., C.M., F.R.C.S (Ed.)	L.M.S.	Peking.
	Peill, Sydney G. (潘), M.B., CH. B. (Ed.)	L.M.S.	Tsangchow, Chihli.
1892	Pell, John Williams (貝), L.R.C.S. & P.	W.M.S.	Paoking Hunan.
	Phillips, Miss E. Margaret, B. Sc., M.B., CH. B. (Manchester)	S.P.G.	Pingyin, Shantung.
1905	Phillips, Walter (費維德), M.B., B. CH. (R.U.I.)	L.P.M.	Newchwang.
1901	Plummer, William Edwin, (包 笠 茂) M.R.C.S., L.R.C.P. (Eng.)	U.M.F.C.M.	Wenchow.
1896	Polk, Miss Margaret Harrison, M.D. (Wom. Med. Col., Phil.), (人 明 慧)	M.E.M.S.	Soochow.
	Rees, Philip, B.A., B. Sc., M.B., (Lond.)	W.M.S.	Wuchow.
1883	Reifsnyder, Miss Elizabeth (羅), M.D. "Margaret Williamson"	W.U.M.	Shanghai.
	Reid, Wightman T., M.D.	M.E.M.S.	Songdo, Korea.
1881	Riddel, Rev. William (烈), M.D. (Aberdeen)	E.P.M.	Wukingfu, Swatow.
1906	Robertson, William Edgar, M.D.	A.P.M.	Hengchowfu, Hunan
	Robson, John Kelsall, M.D.	E.M.M.	Tongshan.
1904	Roys, Charles Kirkland, M.D. (Phys. & Surg. N.Y.)	A.P.M.	Weihsien.
1894	Sandeman, Muir, (萬), M.B., C.M. (Ed.)	E.P.M.	Swabue, Swatow.
1906	Sanders, James Herbert, M.D., M.R.C.S., L.R.C.P. "Matilda Hospital" (London).		Hongkong.
	Sanger, F. M.D., D.P.H. (Cantab.)	C.M.S.	Hinghua, Foochow.
1899	Savin, L., (林), M.D., M.R.C.S., L.R.C.P. (Lond.)	E.M.M.	Chaotung Yun.
1908	Schoch, Victor, M.D. (Zurich)	Basel M.	Kaying, Swatow.
1889	Scott, Mrs. A. K. (蘇), M.D.	A.B.M.U.	Swatow.
	Scott, Ida M., M.D. (Cleveland Hom. Med. College)	Ref. Pres.	Takhing.
1906	Scott, William T., M.D., C.M. (McGill)	C.P.M.	Kwaikingfu, Honan.
	Scranton, W. B., M.D.		Seoul, Korea.
	Selden, Charles C., M.D., PH. D. "John G. Kerr Refuge for Insane"	A.P.M.	Canton.
1902	Service, Charles Winfield, M.D. (Trinity, Toronto)	C.M.M.	Kiatingfu Sze.
1893	Seymour, Walter Frederick, M.D. (North-western U.) (葛惟甫),	A.P.M.	Tengchowfu, Shantung.
1901	Shackleton, William (薛向榮), M.D., B. CH., B.A.O. (Trinity Col., Dublin)	C.I.M.	Chinkiang.
1903	Shelton, A.L., M.D. (Kentucky U.)	F.C.M.	Tatsienlu.
1905	Shields, Randolph Tucker, A.B. (Wash. & Lee) M.D. (U. Col. Med., Richmond)	S.P.M.	Soochow.
	Shire, Miss Mary J., L.R.C.P. & S. (Ireland)	C.E.Z.M.	Foochow.
	Shumaker, H. K., M.D.		Canton.
1903	Sibree, Miss Alice, L.R.C.P. & S. "Alice Memorial Maternity"	L.M.S.	Hongkong.

Date of Arrival.	*Name.*	*Society.*	*Station.*
	Simms, Miss M. Eva, M.B., CH. B., B.A.O. (R.U.I.)	I.M.P.	Chinchowfu, Manchuria.
1893	Sjoquist, John (許長美), M.D. (Rush)	Swed. Ev. Mis. Cov. of Am.	Siangyangfu, Hupeh.
1897	Skinner, J. E. (蘇), M.D.	M.E.M.	Iongbing, Foochow.
1901	Smith, Miss E. D., M.D.	A.B.C.F.M.	Inghok. ,,
1888	Smith, G. Purves, M.B., C.M. (Ed.)		Tientsin.
1896	Smith, W. E., (王) M.D.	C.M.M.	Kiating.
1904	Somerville, Charles W., M.D. CH.B., D.PH. (Ed.)	L.M.S.	Wuchang.
1896	Squibbs, Walter, F.R.C.S., L.R.C.P. (Ed.)	C.M.S.	Mienchuhsien, Sze.
1905	Starmer, Miss Ethel L., M.B., C.M. (Ed.)	U.F.C.S.	Moukden.
1908	Stenhouse, John Maitland, M.B., B.C. (Cantab.)	Un. Med. Col.	Peking.
1896	Stewart, Mrs. H. B. (*née* Cousins), M.D.		Hankow.
	Stobie, Mrs., L.R.C.P. & S.	U.F.C.S.	Kaiyuen, Manch.
	Stone, Miss Mary, M.D.	M.E.M.	Kiukiang.
	Stryker, Miss Minnie, M.D. (Wom. Col., Penn.)	A.B.C.F.M.	Foochow.
1906	Stuart, David Todd, M.D. (U. of Virginia) "Elizabeth Blake"	S.P.M.	Soochow.
1886	Stuart, Rev. George Arthur (師圖爾), M.D.	M.E.M.	Nanking.
1905	Stuckey, Edward Joseph, B.SC., M.B., B.S. (Adelaide)	L.M.S.	Siaochang.
1885	Swan, John M. (關) M.D.	A.P.M.	Canton.
1895	Taft, Miss Gertrude, M.D. (U. of S. Cal.) "Hos. for Women & Children" (登格矩)	M.E.M.	Chinkiang.
	Tallmon, Miss Susan B., M.D. (Chicago)	A.B.C.F.M.	Linchenghsien, Ch'li
1893	Tatchell, Arthur William, M.R.C.S., L.R.C.P. (London) (戴盡心)	W.M.S.	Hankow.
1906	Taylor, Adrian S., M.D. (U. of Virginia)	S.B.C.	Yangchow.
1905	Taylor, Harry Baylor, M.D. (U. of Virginia) "St. James" (戴世瑞)	A.P.E.M.	Anking.
	Taylor, B. Van Someren (雷), M.B., C.M. (Ed.)	C.M.S.	Hinghua, Foochow.
	Teusler, R. B., M.D.	A.P.E.M.	Tokyo, Japan.
	Thacker, Miss Louisa Graham, M.B., B.S. (Lond.)	E.P.M.	Chuänchowfu.
1902	Todd, Paul J., M.D.		Canton.
1902	Tompkins, Charles E., M.D.	A.B.M.U.	Suifu.
1901	Tooker, Frederick J., M.D.	A.P.M.	Hwaiyuan An.
1901	Tooker, Mrs. F. J. (*née* Mary E. Fitch), M.D.	A.P.M.	Hwaiyuan An.
	Toy, W. B., M.D.	A.P.M.	Pitsaunlok, Siam.
1895	Tribe, Miss Ethel Newton, M.D. (Lond.) "Shantung Road Women's" (泰智以)	L.M.S.	Shanghai.
1906	Tucker, A. W., M.D., A.B. "St. Luke's"	A.P.E.M.	Shanghai.
1902	Tucker, Francis F. M.D. (Rush) "Williams" (德福爾)	A.B.C.F.M.	Pangkiachwang.
1902	Tucker, Mrs. F. F., M.D. (Wom. Med., Chicago) (*née* Emma Boose)	A.B.C.F.M.	Pangkiachwang.
1894	Burgh, Ernest D. Van der, M.D. (U. of City of N.Y.) "Tooker Memorial" (文大爾)	A.P.M.	Siangtan, Hunan.

Date of Arrival.	*Name.*	*Society.*	*Station.*
1903	Venable, Wade Hampton, M.D. (U. of Virginia) (文淵博)	S.P.M.	Kashing.
1907	Vortisch, Hermann (和士明), M.D.	Basel Mis.	Kuchuk, Canton.
1885	Watson, J. Russel, M.B. (Durham), M.R.C.S. D.P.H. (Cantab.) (武)	E.B.M.	Tsingchowfu S'tung.
	Watson, Mrs. J. R. (武), L.K.Q.C.P. & S. (Ireland)	E.B.M.	Tsingchowfu S'tung.
	Weir, H. H., M.B. (Cantab.), M.R.C.S.	Ch. of Eng.	Chemulpo, Korea.
	Wells, J. Hunter, M.D.	S.P.M.	Pyengyang, Korea.
1905	Wenham, Herbert V., M.B., B.S. (Lond.) F.R.C.S.	Union Med Col.	Peking
1882	Westwater, H. M. (吳) L.R.C.P. & S.	U.F.C.S.	Liaoyang, M'churia.
1905	Whitmore, Frank B., B.Sc., M.D. (U. of Illinois)	Y.M.C.A.	Nanking.
1907	Wheeler, Edwin Robert, M.B., B.S. (Lond.) (惠亨通)	Un. Med. Col.	Peking.
1877	Whitney, H. T., M.D.	A.B.C.F.M.	Foochow.
	Whiting, H. C., M.D.	A.P.M.	Chai Ryong, Korea.
1903	Whyte, Geo. Duncan (懷敦幹), M.B., CH. B. (Ed.)	E.P.M.	Swatow.
1907	Wight, Andrew, M.B., CH. B. (Ed.) (越) "W. C. Burns Memorial"	E.P.M.	Chaochowfu.
1895	Wilkinson, J. R., M.D. (Med. Col. of So. Car.) (惠更生) "Elizabeth Blake"	S.P.M.	Soochow.
1901	Williams, Walter W., M.D. (Washington U.)	M.E.M.	Ingan, Fukien.
1897	Wills, E. F. (魏), M.B., C.M. (Ed.)	L.M.S.	Taaoshih, Hupeh.
1882	Wilson, William (維), M.B., C.M. (Ed.)	C.I.M.	Suitingfu, Sze.
1893	Wittenberg, Herman (韋嵩山), M.D. (Tubingen)	Basel Mis.	Kaying, Swatow.
1866	Wolfendale, Richard, L.R.C.P. & S. (Ed.) (樊立德)	L.M.S.	Chungking.
1884	Woodhull, Miss Kate C. (富), M.D.	A.B.C.F.M.	Foochow.
1894	Woods, James B. (林), M.D. (U. of Virginia)	S.P.M.	Tsingkiangpu.
1895	Worth, George C., M.D.	S.P.M.	Kiangyin.
1902	Wright, James M., M.D. (Kansas) (荔雅各) "Gregg Memorial"	Am. Ref. Pres. Mis.	Takhing, Canton.
1907	Young, Andrew V., L.R.C.P. & S. (Glasgow)	E.B.M.	Sianfu.
1907	Young, Mrs. A. V., M.A., M.D. (Baltimore.) (*née* Charlotte Murdock)	E.B.M.	Sianfu.
1904	Young, Charles Whittier, M.D., B.S. (Johns Hopkins) (楊懷德)	A.B.C.F.M.	Peking.
1901	Young, Ernest McKillop, M.B., CH. B. (Ed.)	U.F.C.S.	Ashiho, Kirin.
	Young, Ernest McKillop, L.R.C.P. & S. (*née* Sampson)	U.F.C.S.	Ashiho, Kirin.
1896	Young, W. A. (雍), M.B., C.M. (Ed.)	U.F.C.S.	Hailungcheng Man.

CORRESPONDING AND HONORARY MEMBERS.

Adams, W. F., M.D., D.D.S.	Canada.
Aldridge, Rev. Arthur, M.R.C.S., L.R.C.P.	England.
Barchet, S. P., M.D.	Shanghai.
Blaikie, Mrs. Garden, M.B., CH. B. (Ed.)	England.
Burnham, Miss Mary, M.D.	Mexico.
Coltman, R. J., M.D.	Tientsin.
Crews, Rev. G. B., M.D.	At home.
Daly, C. de B., M.D., C.M.	Newchwang
Davis, Rev. D. H., M.A., D.D.	Shanghai.
Eytinge, E. J., M.D.	U.S. Navy.
Faries, W. R., M.D.	Orange, Cal., U.S.A.
Farnham, Rev. J. M. W., D.D.	Shanghai.
Feldmann, C. Herman, M.D. (Munich)	Eikardsheim, Minden, Germany
Fryer, John, L.I.D.	Berkeley, Cal.
Grant, Miss M. S., M.D.	U.S.A.
Hearn, A. G., M.D.	Soochow.
Hickin, H., M.B., C.M.	Weihaiwei.
Horder, E. G., L.R.C.P. & S.	England.
Irwin, J. O. M., M.D.	Tientsin.
Jackson, J. W., M.B., C.M.	Shanghai.
King, Mrs. L. H., M.D.	London Mission, Tientsin.
Lalcaca, C., M.D.	Shanghai.
Lambuth, Rev. W. R., M.D.	U.S.A.
Mabie, Catherine, M.D.	Congo.
McFarlane, S. S., M.B., C.M.	In England.
McLeod, Neil, M.D.	Shanghai.
Milles, W. J., F.R.C.S.	Shanghai.
Mills, C. F., M.D.	Ningpo.
Moule, Rt. Rev. G. E., D.D.	Hangchow.
Olsen, G. M. M.D.	U.S. Navy.
Parrott, A. G., M.R.C.S., L.R.C.P.	Shanghai.
Peck, A. P., M.D	Tientsin.
Patrick, H. C., M.B., C.M. (Glasgow)	Shanghai.
Porter, Rev. H. D., M.D.	La Mese, San Diego Co., Calif.
Reber, Hans, M.D.	Canton.
Rennie, T., M.D., C.M.	Foochow.
Savile, Miss Lily E. V., M.D.	England.
Scudder, Ida, M.D.	Vellore, India.
Simpson, Sir Alex. R., M.D.	Edinburgh, Scotland.
Smyth, R., M.B. CH. B.	England.
Thomson, Ven. Archdeacon	Shanghai.
Thomson, John C., M.B., C.M.	Hongkong.
West, B. F., M.D.	Seattle, U.S.A.

SHANGHAI, Oct. 1908.

ROBERT EDWIN WORLEY, M.D.

Drowned at Swatow, June 27th, 1907.

Reprinted by courtesy of *The New East.*

The
China Medical Journal.

VOL. XXII. JANUARY, 1908. NO. 1.

Original Communications.

[All copy must be in the hands of the Editors one month before date of publication to insure appearance in the following number The editors cannot undertake to return manuscripts which are sent to them. A complimentary edition of a dozen reprints of his article will be furnished each contributor. Any number of reprints may be had at reasonable rates if a *written* order for the same accompany the paper.]

PRESENT PROBLEMS OF TYPHOID FEVER, CLINICAL AND SCIENTIFIC.

By EDWARD H. HUME, M.D., Changsha.

It is very easy for us who read of the constant presence of typhoid fever in Western lands to excuse ourselves from an energetic crusade against this modern Minotaur on the ground that we certainly cannot hope to do more in China than health boards do at home. But is it not time that we stirred ourselves out here to better methods of diagnosis so as to avoid the issuing of statements such as have been publicly made this year from two mission hospitals in China to the effect that typhoid was one of the diseases not seen in that part of the country referred to? Instead of puzzling ourselves over the source of infection in sporadic, appareutly isolated cases among foreigners, shall we not rather rouse ourselves to realize that typhoid *is* common enough among the Chinese? I have only to remind you of the word uttered ou this point by Dr. Hodge at the Medical Conference in Shanghai in April, and to give you, in addition, one concrete iustance. At the Pinghsiang collieries, in a hospital with but twenty-five beds, Dr. Kreyenberg reports at least 25 cases during the first six months of 1907. How commonly the diaguosis is missed at home may be inferred from the report for 1906 of the Metropolitan Asylums Board of Loudon.* Of 30,228 cases admitted, 2,151 were found *not* to be suffering from the disease certified, an error of over 7 per cent. While the error among cases certified as scarlet fever was 5.2 per cent., and as diphtheria 18.3 per cent., the error among those certified as typhoid fever was

Journal of the A. M. A., June 15th, 1907, p. 2,040.

33.7 per cent.! It is obvious that much has yet to be done in the perfection and universalizing of accurate methods of diagnosis. I hope to present, in this paper, a brief summary of recent work on the nature and manifestations of typhoid fever, and to show that the bedside and laboratory methods used in its recognition and treatment in Europe and America can be adopted in China; some of them by us individually in our own hospitals; and all of them with the co-operation of the Shanghai Municipal Laboratory or of the laboratories gradually springing up in other medical centres in China.

I. PATHOGENESIS.

We are still some distance from a correct understanding of the nature of typhoid fever. We have made progress since the days when it was considered to be due to miasms; and we are well aware that the term "enteric" fever is hardly an appropriate one when the enteric lesions are but one manifestation of the activities of the toxin that is circulating throughout the system. Allow me to refer to the two most modern views as to the nature of this disease. The first is that of Ewing,* who believes that "the degenerative changes in the liver, kidneys and lymphoid organs, while initiated by the bacterial proteids, possess certain self-pepetuating tendencies," and that therefore "typhoid fever is a combination of specific bacterial intoxication and a somewhat peculiar auto-intoxication; the former element being more prominent early, the other later in the disease, but both developing simultaneously." It has been argued against this view that "convalescence is established immediately upon disappearance of bacilli from the blood and is probably not interrupted except as a result of a fresh growth of bacilli; and that Ewing's position is untenable unless it can be shown that symptoms of typhoid fever would persist after the complete destruction of all bacilli in the body."

The second is the recently advanced theory of Coleman and Buxton,† whose studies have been so thorough and exhaustive that for me, at least, their theory becomes a working hypothesis. Their view of the pathogenesis of the disease is as follows: that it is caused by the destruction of vast numbers of bacilli in the blood, with the liberation of their endotoxins and the consequent reaction on the part of the host. When the endotoxins are liberated elsewhere in the body, e.g., in abscesses, the symptomatology is not that of typhoid fever. This conception of the nature of typhoid fever is borne out by analogy. It is

* *American Journal Medical Science*, June, 1907, p. 901.
† *Idem*, p. 900.

known, e.g., that B. paratyphosus may infect the intestine and produce the clinical picture of gastroenteritis, but that when it invades the lymph organs and blood, it produces a disease clinically indistinguishable from typhoid fever. Diplococcus lanceolatus and the various streptococci furnish similar analogies in that they produce different affections according to the regions they attack.

Two factors seem to me to support their theory outside of their own experiments: (1) The gall bladder, the urinary bladder, and other organs are known to have been occasionally infected with typhoid bacilli without a previous or existent typhoid fever. (2) My own animal experiments with typhoid and paratyphoid bacilli have repeatedly shown that there may be no febrile manifestations and certainly no true signs of typhoid fever, though the inoculated animal may be infested with countless bacilli. This is true in anthropoid apes as well as in rabbits and guinea-pigs.

An analysis of cases of blood-culture in the successive weeks of the disease suggests the following relation of the bacillemia to the course of the fever. "In the earlier stages the bacillus invades the blood in greatest numbers. Later, as the disease is approaching a favorable termination, the diminution in the number of bacilli in the blood is simply an index of less active development in the lymphatics and spleen. If the disease in any case pursues a long course, beyond the usual three weeks, the bacillus may be recovered from the blood as long as the temperature persists. There appears, then, to be a definite relation in the evolution of typhoid fever between the symptoms and the bacillemia. The increasing intensity of the symptoms in the earlier period of the disease corresponds to active growth of the bacilli. They invade the blood stream in increasing numbers and are there destroyed. Then comes the stationary period, when the ratios of growth and destruction appear uniform. The steep curve period corresponds to the diminishing bacillemia and defervescence to the complete disappearance of the bacilli from the blood. In other words, the duration of the febrile movement is measured by the persistence of the bacillemia." *

To sum up, typhoid fever can no longer be regarded simply as an infection of the body with typhoid and related bacilli (B. paratyphosus, etc.). The typhoid bacilli may be present in the body and actively growing, but the patient not have typhoid fever. The clinical picture of typhoid fever results only from infection of the lymphopoietic organs by the typhoid bacillus, with invasion of the blood stream and destruction there of vast numbers of bacilli. The bacillemia does not

* *American Journal Medical Science* June, 1907, p. 900.

constitute a true septicemia, but represents an overflow from the lymphopoietic organs.

The relapse in typhoid fever is explained by Coleman and Buxton as follows: "Reinvasion of the blood with destruction of the bacilli probably cause the symptoms of a relapse, but the underlying conditions which inaugurate active development of the bacilli, after their growth has once been brought under control, are unknown. We feel safe in asserting that a relapse is not due to reinfection with typhoid bacilli from the intestine as the result of intestinal trauma, brought about by dietetic irregularities. We do not wish to intimate, however, that we believe the occurrence of a relapse is entirely independent of diet."

II. ETIOLOGY.

The most important advauce in our knowledge of the manner in which typhoid fever is spread, lies in the observation that a measurable percentage of persons who have recovered from typhoid continue to be chronic "carriers" of the disease. In one case reported in 1906, bacilli were isolated from the dejecta forty-two years after a known attack of the fever. At three laboratories in Germany three per cent. of 1,700 persons were found to be chronic "carriers." This observation is so suggestive as to the etiology of what we often consider to be obscure cases that I shall refer in detail to two special reports. In a German asylum with 900 inmates, typhoid and acute dysentery were both endemic; most of the cases occurring in a certain pavilion with 250 inmates. Typhoid bacilli were found in the stools of a patient with acute dysentery. Her serum agglutinated B. typhosus in a dilution of 1:100, and that of dysentery (Flexner type) in a dilution of 1:800. At the autopsy of another patient who died of chronic dysentery, B. typhosus was isolated from the intestine and in pure culture from the gall-bladder which contained gall-stones. B. typhosus was agglutinated by the patient's serum 1:50, and the Flexner type of dysentery bacillus 1:100. Further investigation revealed five more carriers of bacilli, making a total of seven among 250 patients. In another pavilion two more carriers were found. In both pavilions, after isolatiug the discovered carriers, typhoid ceased to be endemic.*

The most striking and instructive instance in the literature of the part a healthy person may play as a chronic typhoid fever producer was published in June, 1907.† Six persons iu a household of eleven developed typhoid fever between August 27th and September 3rd, 1906.

* *Munchen Med. Woch.*, 1906, LIII, p. 1,611.
† *Jour. of the A. M. A.*, June 15, 1907, p. 2,019.

Careful examination excluded the water, milk, vegetables, fruit, and soft clams as possible sources. There were no cases in the town immediately preceding or following those studied, and none of the patients had been away for several weeks before they fell ill. There was, therefore, no question but that the disease had been acquired on the premises, which, however, were found in a thoroughly hygienic condition. On August 4th, a change of cooks had taken place, and the new cook remained with the family for three weeks before and three weeks after the outbreak. An investigation of her previous career showed that, although the record for nearly two of the past five years had not been completed, twenty-six cases of typhoid, including one death, were associated with her services in seven families during this time. Indirect information indicated that she herself had had a mild attack. On March 11th, 1907, the cook, who was a large healthy Irish woman, forty years of age, was taken in charge by the Department of Health of New York city. The urine was found free from typhoid bacilli, but the stools showed great numbers practically every day for six weeks and the blood gave a positive agglutination reaction. The case illustrates admirably the care and thoroughness necessary in order to discover the results traceable to bacillus-carriers, whose rôle in the dissemination of typhoid fever must always enter into consideration now wherever the source of an outbreak is in any way obscure."

Two further cases will help to emphasize still other sources of infection that must be guarded against. One is that of a laboratory assistant to Achard, * whose duty it was to carry urines from ward to laboratory, and who became infected from the carrying of typhoid urine, as did also the interne who examined the specimen. The other is an interesting case reported from St. Thomas's Hospital in London.† A man, age twenty-eight, had typhoid fever in July, 1902, was operated on for perforation of the ileum and recovered. He was discharged September 10th, but readmitted September 18th, complaining of pain in the right femur and knee. *Potassium iodide* and external applications gave relief. On October 18th, 1904, he was readmitted with pain in the femur; on November 6th, he was operated on for periosteal abscess, from which B. typhosus was isolated in pure culture. He was discharged December 21st, with a healed wound, but the sinus reformed, and he was again admitted in June, 1905. At about this time his wife, who handled his dressings, fell ill with typhoid and died. From the

* *Presse Medicale*, 1907, XL. No. 5.
† *Lancet*, July 7th, 1907, p. 26.

open sinus in the man's femur which his wife was obliged to dress, B. typhosus was isolated in pure culture.

In this connection reference must be made to two cases that show how even little children, without clearly marked symptoms, may be harboring and spreading typhoid infection. In one case the patient was only sixteen months old.* There had been definite cases of typhoid in the household, and finally the infant itself had an illness with prolonged but moderate temperature, with gastro-intestinal symptoms, complicated by pneumonia. The Gruber-Widal reaction was positive only after some weeks. After two weeks of normal temperature, the infant was sent to another city, where it entered a home, previously uninfected. Three weeks later two of the children there came down with typhoid and two weeks later still another. No source for the infection could be traced. The other case † was that of a girl of seven and half years, who had an indefinite illness for thirty days before removal to hospital, and from whom six other children between one and half and nine years of age became infected. They lived in flats and were in the habit of playing together in the lobbies. No adults became infected. The importance of records such as the above can hardly be overestimated in guiding us to surer methods of prophylaxis.

III. PROPHYLAXIS.

The following rules should be laid down :—‡

1. Become thoroughly acquainted with all known methods of infection with the typhoid bacillus : (a). Food and water contamination, either directly from the dejecta of patients or by flies. (b). Contact with the clothes, belongings, or dejecta of patients.

2. Prevent infection of the patient : (a). Guard the water-supply. (b). Guard the dejecta of patients from flies. (c). Guard against contagion.

3. Prevent the escape of the infective agent from the patient. (a). Sterilize the urine. Allow 200 c.c. of 1:1000 *bichloride* solution to stand in a covered jar. The patient's urine should be poured into this and allowed to stand for two hours. 200 c.c. of bichloride solution will sterilize 3 000 c.c. of urine. In another vessel keep a strong solution of *bichloride* or *carbolic acid* for sterilizing the urinal. Urinals for typhoid patients should be strictly isolated. It is to be noted that urotropin does not sterilize the urine, but does prevent multiplication of bacilli. 2.0 grams should be given daily, divided into three or four doses. (b). Sterilize the feces. Add to each dejection twice its volume of carbolic solution 1:20, stir well and allow to stand for two hours. The bedpan, when not in use, should be immersed in a strong disinfectant or boiled. (c). Sterilize the bath water. Add to each tub a half lb. of chlorinated lime and allow to stand for half an hour. (d). Sterilize all dishes and utensils by boiling.

To the above rules should be added one more, namely,

4. Recognize your cases early.

* Archives of Pediatrics, March, 1907.
† *Brit. Med. Journ.*, June, 1906.
‡ Cf. article by W. S. Thayer, *Maryland Med. Journ.*, 1907.

A printed sheet with the above rules, hung near each typhoid patient, and constantly re-emphasized by the physician, would do much toward preventing the spread of the disease. An interesting experience has been recently recorded by Dehler,* who made use of the observation that bacilli might be excreted by apparently healthy persons for long periods. His patient was an insane woman, and, before the discovery that she was a carrier of typhoid bacilli, she had infected a number of other persons. Extensive rectal prolapse and a constant tendency to diarrhoea, with much mucus and blood-streaked scraps, increased the danger of infecting others and of complications for herself. There were no symptoms from the gall-bladder, but typhoid bacilli were discovered in the stools in 37 out of 39 examinations. The gall-bladder was loosened from adhesions and opened. Two gall-stones, the size of cherries, were removed. One of the stones had been obstructing the cystic duct. The bile flowed so freely after taking out this stone that removal of the gall-bladder, or drainage of the hepatic duct, seemed unnecessary. A tube was inserted in the cystic duct and recovery was uneventful. With one exception, when a few bacilli were found in the stool, soon after the operation, the stools have since been permanently free from typhoid bacilli. None were ever found in the blood or urine. The patient has also been free from diarrhœa since the operation. The agglutination test has persisted positive at 1:100. The typhoid bacilli were evidently dislodged from the gall-bladder when the flow of bile became regular without stagnation.

IV. IMMUNIZATION.

It is not at all impossible that we shall see the day when inoculation against cholera and typhoid will be as common as inoculation against plague is in India, and perhaps even as common as vaccination is elsewhere. A recent report on anti-typhoid inoculation shows definite improvement over the results recorded in connection with the South African war six years ago.† Among 324 non-inoculated patients, there was a mortality of 11.1 per cent., while among 100 inoculated patients there were but four deaths. The illness was more severe and the complications more numerous among the non-inoculated. Severe cases among the inoculated were only seen if developing shortly after inoculation.

Still more recently Eichholz‡ has reported the course of typhoid fever in 68 men, half of whom had been previously treated with anti-typhoid serum. There was no mortality among the immunized, but

* *Munchen Med. Woch.*, LIV, No. 16, quoted in the *Journ. of the A. M. A.*, July 6th, 1907.
† *Archiv. f. Schiffs u. Tropen Hyg.*, 1905, December.
‡ *Munch. Med. Woch.*, LIV, No. 16.

three of the non-immunized patients died. Severe complications were observed in three of the former and in seven of the latter group. The height and duration of the fever were much less marked in the immunized.

V. DIAGNOSIS.

In 1896-7, a most important step was taken towards associating laboratory diagnosis with bedside recognition of typhoid when the Gruber-Widal test was made public. Since that time the greatest contributions to the study of typhoid fever have been along this one line of diagnosis. Granted an early diagnosis—and that is where the Gruber-Widal test disappoints us—it would be so easy to lay down rigid rules of prophylaxis and to institute wise treatment early. Of recent progress in the bedside diagnosis of typhoid there is little to say. One sign, noted first by Philipowicz in 1903, has been lately referred to again,* namely, a yellowish discoloration of the palms of the hands. A number of Italian observers regard the sign, while not peculiar to typhoid, as highly suggestive, and in one case an early diagnosis was reached mainly by means of this sign. Again, Rollestoue† draws attention to the loss of the abdominal reflex, and says that in persons under fifty, this occurs only in certain nervous diseases and in acute abdominal conditions, notably typhoid and appendicitis. "Hence the inference that in a patient under fifty suffering from an acute fever, and showing no abdominal reflex, the disease is probably typhoid fever." In 45 cases of typhoid the reflex was affected in 43, being lost in 31 and impaired in 11. "In typhoid fever the infra-umbilical reflex is the first to disappear and the last to re-appear. The supra-umbilical response may be active throughout the disease, or more commonly responds slightly and becomes rapidly exhausted by a few stimuli. Re-appearance of the reflex or an increase in its activity indicates improvement while persistent absence, in spite of lysis, suggests that a relapse is immineut."

LABORATORY METHODS.

The serum reaction continues to hold a most important place in typhoid diagnosis. Judging from the experiences with blood-cultures about to be referred to, one is led to feel, *a priori*, that typhoid bacilli are always present in the blood before serum reaction develops, for the reason that eudotoxins must be liberated before agglutinins are formed. The truth of this is shown in an analysis of 391 cases reported in five

* *Medical Press and Circular*, 1906, LXXXII, 6.
† *Braen*, 1906, XXIX, 99.

papers, 94 of which showed bacilli in the blood, but gave no serum reaction.* For the complete diagnosis of an obscure case by the serum reaction the test should be frequently repeated. The test itself can be readily made by every physician, however remote from a laboratory, by means of the outfit supplied by makers in Europe and America.† It may be mentioned that in the only case the writer was able to examine after the apparatus came to hand, a negative result was obtained in a case that at first seemed clinically to be typhoid, but which, later on, proved to be clinically unlike that disease.

Reference has already been made to the presence of typhoid bacilli in the blood early in the disease. This has naturally led to the use of blood cultures as a means of positive diagnosis. A most complete *résumé* of such examinations has been recently published by Coleman and Buxton, who tabulate the findings in 1,602 cases. In 1,197 of these, i.e., 75 per cent., typhoid bacilli were recovered from the blood. The examinations were made at all stages of the disease and by different methods. Since the use of bile-containing media is the only method that can be confidently depended upon, so large a percentage of positive results goes far to prove that the bacillus is present in the blood in practically all cases of typhoid fever. An analysis of the examinations by weeks shows that of 224 examinations in the first week of the disease, 200, or 89 per cent. were positive. The earliest positive result has been recorded by Widal, who recovered the bacillus from the blood on the second day of the disease. The reported positive results become more frequent as the end of the first week is approached, only, we believe, because the disease is not suspected earlier and the examinations made, or because the cases do not come under observation.

Second week: Of 484 examinations made in the second week of the disease, 353, or 73 per cent., were positive.

Third week: Of 268 examinations made in the third week, 178, or 60 per cent., were positive.

Fourth week: Of 103 examinations made in the fourth week, 39, or 38 per cent., were positive.

After the fourth week: Of 58 examinations made after the fourth week of the disease, exclusive of relapses, 15, or 26 per cent., were positive. Since the introduction of the bile method, Coleman and Buxton,‡ like Busquet, Conradi and others, have had practically 100 per cent. of positive results. Their technique is as

* *Amer. Journ. Med. Sci.*, June, 1907, p. 902.

† { 1. Typhoid Agglutometer, No. 2. Parke, Davis & Co., Detroit, U. S. A.
  { 2. Ficker's typhusdiagnostik, E. Merck, Darmstadt, Germany.

‡ *Amer. Journ. Med. Sci.*, June, 1907, p. 895.

follows: 10 c.c. of blood are drawn into an all-glass syringe from a vein at the bend of the elbow. A mixture is made of ox-bile 90 c.c., *glycerin* 10 c.c. and peptone two grams, distributed into small flasks, 20 c.c. in each, and sterilized. Three of these flasks are used for each examination; about 3 c.c. of blood being run into each. The flasks are then incubated, and the next morning streaks are made from each flask over the surface of a litmus-lactose-agar plate. If micro-organisms are present, a growth may be observed in five or six hours. If the growth does not redden the medium, and is found to be a bacillus resembling the typhoid organism, it is tested for the Widal reaction with immune serum. By this procedure it is often possible to determine whether or not the case is one of typhoid fever within twenty-four hours after drawing the blood. Conradi's* most recent method of procedure calls for even less blood. He receives the blood directly from the ear into the bile-glycerin-peptone mixture, which is contained in a capillary glass tube, and after thorough mixing, the contents of the tube are emptied into the larger tube (holding 2 to 3 c.c.), and this is repeated till all the blood which flows from the little wound in the ear is mixed. The proportion of blood to the entire liquid must be kept as low as 1: 3. The mixture is kept in the incubator at 37° C. for from 16 to 32 hours, and then plated on the Drigalski-Conradi medium (Lactose-litmus-agar, with nutrose and crystall-violet).

The object of the ox-bile is not only to hinder the coagulation of the blood but also to hinder the growth of other organisms than those such as B. typhosus, B. coli, etc., which are strong growers. Müller and Graf† have beeu trying to devise some other method by which blood could be kept fluid long enough to permit of its transfer to a laboratory. They found that hirudin, a trade name for an extract of leeches, kept the blood fluid and did not kill the bacteria. They found, later, that blood-clots could be used satisfactorily; the bacilli being entangled in the clot. Conradi,‡ continuing this study, finds that the clot from 0.2 c.c. (four drops) of blood will give cultures that enable the diagnosis to be made in fifty per cent. of cases. He draws out the thread of clot with forceps, puts it in a tube containing 5 c.c. of his bile-mixture and incubates from 12 to 16 hours at 37° C., then spreads with a spatula, 0.1 and 1.0 c.c. on dried plates of lactose-litmus-agar.

---

* *Munch. Med. Woch.*, 1906, LIII, 1654.
† *Progressive Med.*, March, 1907, p. 125.
‡ *Munch. Med. Woch.*, 1906, LIII, No. 49.

Perhaps even more remarkable is the method of Pöppelmann,* who reports the demonstration of the bacilli in blood smears. The smears are made in the ordinary manner and then stained by the May-Grünewald method. Pöppelmann claims to have gotten much better results with this stain than with any other. If this last observation shall be confirmed, greater attention than ever will have to be paid to the avoidance of infection from slight cuts in the patient's skin, or from lesions in the mouth and elsewhere. It is well enough known that typhoid bacilli may be regularly recovered from rose-spots. Those who are willing to resort to splenic puncture probably get a larger percentage of early diagnoses than other observers; one hospital reporting 94.4 per cent. of successful results.† Before leaving the subject of diagnosis, a word must be said about typhoid opsonins. During the early period of the disease, the opsonic index is high, and this fact will doubtless add one method of confirming the diagnosis in doubtful cases. The index varies from day to day, falls as the temperature begins to fall, and increases again during convalescence.‡

VI. TREATMENT.

A recent report from the von Jaksch clinic§ only confirms the growing belief that the only manner in which a low mortality rate can be consistently attained apart from serum treatment, is by the systematic use of the bath-treatment. Where these are given, it is a matter of common observation that the use of antipyretics and other medication is dispensed with as a routine. Let me remind you that aside from serum treatment a mortality rate of but 7.5 per cent., including every case admitted, even though moribund, and covering a long series of years, has only been reported from two hospitals; one of them in New South Wales and the other in Baltimore, U. S. A.‖ At these two hospitals the routine treatment consists of a tub-bath at 85° F. every three hours if the temperature is 103.5° F. or over; the temperature of the water being gradually reduced in later baths if thought wise in the individual case.

Chantemesse,¶ of Paris, has faithfully continued his use of anti-typhoid serum, and in his last report contrasted the results in treating 712 cases over a period of five years with those obtained in treating 3,595 cases in the various other hospitals of Paris over the same period. His

* *Deutsch Med. Woch.*, 1906, XXXII, p. 947.
† *Zeitschr. f. Heilkunde*, 1906, XXVII, ii, 14.
‡ *Journ. of the A. M. A.*, 1906, XLVII, 2,159.
§ *Zeitschrift f. Heilkunde*, 1906, XXVII, ii, 14.
‖ Osler; *Practice of Medicine*.
¶ *Presse Medicale*, 1906, February.

mortality was 3.7 per cent., while among the cases treated by hydrotherapy and other routine means the mortality was 17.3 per cent. This difference in results cannot be accounted for by differences in the character of the epidemic, nor to good fortune in a short series of cases. The beneficial effects of the serum are shown not only by the reduction of the mortality rate to one-fifth of that obtained by other methods, but by the prompt fall of temperature, by the improvement in the pulse, by the increase in the amount of urine, by the shortening of the course of the disease, and by the smaller number of complications. There were nine instances of perforation among the 712 cases, all among those who entered the hospital late. Death has not been seen to occur in a patient who received the serum during the first week of the disease.

VII. COMPLICATIONS.

Reference might be made to a number of unusual complications of typhoid fever recently reported, such as helminthiasis; the continuance of the fever being regarded as unfavorable to the life of worms, orchitis, changes in the mesenteric glands, typhoid infection of the appendix, with successful removal of the organ during the course of typhoid fever, and so on. But I shall only dwell in detail on the matter of the detection of occult blood in the stools; such detection often serving as a warning of severe hemorrhages and as additional evidence of the severity of the process. In the feces of 50 cases, using both the guaiac and the aloin tests, blood was found in 14 cases, of which 7 were severe, 3 moderately severe and 4 mild. Of the 34 cases in which no blood was obtained, 11 were severe, 15 moderately severe, and 8 mild. In some cases traces of occult blood were found 3 or 4 days before gross evidences of hemorrhage were obtained. The use of a mild purgative was likely to be followed by traces of blood in the stool. The guaiac test was regarded as the more delicate.*

To sum up, recent studies on typhoid fever, to some of which allusion has been made in this paper, teach us two things in particular :—

1. That the spread of typhoid fever is a far more subtle thing than we have hitherto imagined; and that therefore those of us who have the care of cases are under a great responsibility to see to it that infection is not carried away from the patient; and if possible, to arrange for a bacteriological examination of his excreta before pronouncing him to be again a safe member of the community.

2. That the diagnosis of typhoid fever is constantly becoming more and more accurate, and that the means of making such diagnosis are within our power to use, especially so far as concerns the serum test. By the use of the blood clot, as indicated by Conradi, we can arrange for diagnosis by blood culture, even though at some distance from a laboratory.

* *Riform. Med.*, 1906, February.

TUMOUR OF CÆCUM.
Low magnification.

A CASE OF INTUSSUSCEPTION (CAECO-COLIC) AND REMARKS ON THE PATHOLOGY OF THE ACCOMPANYING TUMOUR.

By ARTHUR F. COLE, M.R.C.S., L.R.C.P., Ningpo.

On May 9th, 1907, a healthy looking woman, aged forty-one, a vegetarian Buddhist, came to the C. M. S. hospital, Ningpo, complaining of attacks of abdominal colic; these were increasing in frequency and severity daily, pain referred to umbilicus. The history was that the colic had existed five days, and during the last two there had been intermittent vomiting, independent of food ingestion. On close questioning it appeared that there had been a trace of blood in the stools occasionally. On examination a rounded moveable tumour was easily felt in the right iliac fossa. In size it gave one the idea of being as large as an emu's egg. The diagnosis of ileo-cæcal intussusception was made and operation advised. Had it not been for a very severe attack of colic which came on whilst we were urging our views upon the patient, this paper might not have been written. The agony caused her to decide upon immediate operation, and she allowed none of her relatives to dispute her decision. A strangulated hernia a few days before and a long sad line of similar surgical urgencies in which leave to operate had been given by patients and refused by relatives, made us wish all patients were equally strong-minded when necessary.

The abdominal wall was washed with ordinary soap and water, followed by turpentine, and a carbolic compress applied for two hours preceding operation. The umbilicus received special attention because of its special need. A soap and water enema was given previous to operation, and following this the tumour was found to be distinctly smaller than on admission. A two and a half inch incision was made as if for an ordinary appendix excision. Exploration within the peritoneal cavity revealed a long rounded mass, very difficult to manipulate. Finally it was maneuvered to the incision, and with some difficulty (after enlarging the wound) brought into view. The diagnosis was confirmed by the typical appearance of the intussuscipiens and intussusceptum, altogether about eight inches long. No great difficulty was found in reducing it, and though in appearance dusky red, the gut was considered likely to recover. The appendix (one and three quarters inches long) and caput cæci came into view when fully reduced.

Congratulating ourselves upon the comparatively easy reduction of the intussusception we were next led to observe that near the base

of the appendix the walls of the cæcum were puckered and hard and thickened. No glands were felt. It was suspected that it was a malignant growth acting as an initial factor in originating the intussusception. Nothing remained but the plain duty of excising the tumour and a portion of the cæcum. Intestinal clamps shut off the small intestine and the ascending colon. A long piece of boiled absorbent gauze was wrapped round the base of that portion of intestine which was outside the abdomen to shut off the peritoneal contents. With scalpel and scissors the whole suspicious portion of cæcum, together with a margin of healthy tissue, were removed. Bleeding was not very great. The appendix was removed in one piece with the cæcum ; its own mesentery being ligatured in two portions. A specimen of *Trichocephalus dispar* was found lying in one of the rugae of the cæcum laid open ; it did not appear to have transfixed the mucosa, but there were two small hæmorrhages visible. The portion removed was $4\frac{5}{8} \times 1\frac{7}{8}$ inches, and projecting about ½ inch into the lumen of the gut there was a greenish-black tumour, rounded in outline, perfectly smooth and having a diameter of ⅞ inches. The cæcum was stitched up with two rows of Lembert sutures of fine silkworm gut to ensure a watertight line of union. That portion of intestine outside of abdomen was washed with boiled rain water and then put back. The skin incision was closed with two layers of sutures of silkworm gut, peritoneal and superficial. A piece of boiled absorbent gauze was placed at the lower end of wound to act as a safeguard in case of intestinal leakage, and boiled gauze applied as dressings. *Morphia* gr. ¼ hypodermically. Sips of tea were allowed from the first, and forty-two hours after operation an ounce of rice gruel. On the third day nutrient enemata were discontinued, not being retained in spite of the usual precautions. In their place two ounces of rice gruel were given. On the fourth day seven ounces of gruel and tea *ad libitum*. Wind naturally passed gave great relief on the fourth day. On the fifth day a good motion, blackish with altered blood. Abdomen flat and no pain, wound looked very well. From the fourth day onwards temperature and pulse were normal. The only anxious time was on the second day, when the temperature was 101° and pulse 130. *Calomel*, gr. three, was given on the fifth day. Ordinary diet was allowed from the twenty-first day, and on the twenty-eighth day patient was placed on a couch. The patient had to go home six weeks after the operation, but was advised to give the scar freedom from strains due to heavy work.

A great portion of the interest in this case (as well as in the following) lies in the pathology. That the intussusception was recent is very

probable, but the histo-pathology of the tumour makes one doubt whether it was as much older as one would naturally suppose.

Intussusceptions are rare in adults and common in infants. Mr. Harold Barnard, in a paper read before the Hunterian Society in 1907, deals with 187 consecutive cases at the London hospital, of this condition, in which 135 were under one year, 165 under ten years of age. No less than 131 were males. But an intussusception occurring in those who have passed the age of forty would suggest an exciting cause such as a tumour, as was found in this case. The point then arises as to the nature of this tumour. It is the practice in this hospital to submit all tumours excised to a microscopic examination. Because of the special interest in this case, a portion was also sent to Dr. Stanley of Shanghai for an independent opinion, together with the *clinical history*, as useful to a pathologist as to a consultant. (And in this connection we would ask if it is fair to send tissues of doubtful nature for an opinion, keeping back the essential clinical history. We would suggest that the natural inference is that the consultant pathologist is not to be trusted to give an unbiassed opinion. In certain cases a history is of the greatest assistance in coming to a decision.)

To our surprise there was no evidence of its being malignant, but a very definite suggestion that it was factitious and recently produced. A hard rounded tumour projecting into the lumen of gut at a site where malignant growths delight to appear, with peritoneal puckering so marked as to strike even inexperienced eyes, would by most be damned at once as malignant. We were no exception. But microscopically it was seen to consist in the main of widely dilated spaces filled with leucocytes, red cells, and in places with a colloid material, perhaps of lymphatic origin. There is a marked round-celled inflammatory infiltration at the margin of the growth. The surface of the tumour is smooth and the ordinary glandular nature of the cæcal mucosa is replaced by a homogeneous mass of disintegrating cells with different staining properties from the deeper portion. Here and there a suggestion of the original tubular nature can be seen. The green colouration is probably from bile staining. The muscularis mucosæ is somewhat atrophic, but there is no evidence of malignant invasion. The subepithelial tissue is the chief site of the tumour, and what would appear to have been the case is that some constricting agent has caused the formation of a mass nearly one inch in diameter and projecting half an inch into the lumen of the gut. Possibly there had been the extraordinary condition of a reverse intussusception in which a portion of the cæcum became tightly engaged in the orifice of the ileo-cæcal valve

with the circular muscle fibres of that valve in a state of tonic contraction, thus instituting a starting point for the ordinary peristaltic movements which would develop the main intussusception. We cannot say. If it does no more this theory forms an objective for criticism, with perhaps the hope of a less far-fetched solution of the problem. In view of important researches on atypical tubercular growths of the cæcum, we may add that though histologically extremely unlike that condition, sections were also stained by Metchnikoff's method for tubercle bacilli and proved negative. The microphotograph was taken to show the dilated spaces which formed the main part of the tumour, and the homogeneous mass of disintegrating cells, replacing the ordinary tubular glands, can be seen at the surface. It would be ungrateful if I did not acknowledge the very great debt I owe to Dr. J. Jones for assistance given at the operation, and to Dr. Stanley for encouragement and advice in the pathological investigation.

CYCLIC VOMITING.

By H. W. Boone, M.D., Shanghai.

The disease to which I wish to call your attention is one that we meet with in practice from time to time. It will give us much anxiety, and until we understand it well, we will be uncertain as to the best methods of treatment in any given case.

It has been given the names of cyclic vomiting and of persistent vomiting, which only goes to show that no definite cause or lesion has been found for it. We do not know that it is a primary disturbance of the stomach. In many cases the causes of irritation may not be in the stomach at all but may be connected with the solar plexus.

The disease shows itself in attacks of vomiting which recur after intervals of uncertain length. In the intervals the person seems to have good health. The attacks usually last for three or four days, although they may last for a much longer period, and the patient may be in a condition of profound exhaustion with great loss of flesh. It may occur in very young infants and sometimes in adults. It is most common for the first attacks to appear between the ages of two and four years. The majority of these children are delicate and of a highly nervous temperament, and it often occurs among those who have excellent surroundings. It seems to occur in persons of a neurotic type. In the families of some there is a history of gout. These attacks are not due

to errors or excesses in diet, though an excess of *carbohydrates*, e.g., oatmeal or potato, is bad for them. Fatigue, unusual excitement, such as of a party, may bring on an attack ; any severe shock, as a fall on the head, may excite it. Dr. William Pepper (page 23 Cyclopedia of the Diseases of Children) says: "It seemed to me that the essential elemeut in the production of recurrent vomiting is a state of nervous depressiou and irritation affecting especially the centres and fibres supplying and controlling the stomach and liver. I have known this condition to be established almost immediately by a nervous shock, or by excessive fatigue, though more usually it is brought on by the prolonged action of depressing causes. When once it is established, it requires comparatively slight influences to excite a spell. The symptoms indicate the existence of hepatic torpor in most cases, and not rarely a slight degree of gastric catarrh is associated. Probably it is the development of some irritating ptomaine which causes the explosion, or else it is a lowering of the already depressed innervation which violently disturbs the equilibrium of the gastrohepatic functions. The truth is that the underlying tendency above alluded to, however acquired, varies greatly in intensity in different cases, so that the causes needed to call it into action vary greatly in degree and vary also in kind according to the differeut susceptibilities of the individuals affected. The periodicity of the attacks is difficult of explanation. In some instances the spells recur at such irregular intervals as scarcely to merit the name of cyclical. They show only the existence of a continuous tendency which is aroused from time to time by the recurrence of exciting causes. In other cases greater regularity is noted, suggesting that the susceptibility of the nervous system is developed periodically under the operatiou of some rhythmic influence." Max Einhorn (Twentieth Century Practice of Medicine, Vol. 8, page 343), says: "Periodic vomiting is characterized by the following points: 1. It appears in apparently healthy individuals. 2. The paroxysms occur periodically after iutervals of equally long duration. 3. When the attack is over, the patient is perfectly well and no gastric symptoms persist. The periodic vomiting of Leyden is a rare affection, and it does not seem to me that the coudition of the gastric secretion plays an important part in its causation." Rotch (Pediatrics, page 841) says: "Unless the disease is unwisely treated by endeavouring to introduce food or drugs into the stomach, it will usually prove to be self-limited and will run its course in two or three days. Relapses occasionally take place." Dr. Holt (Diseases of Infancy and Childhood, page 328) says: "One case showed a ratio of uric acid to urea of one to eighty-three during

the vomiting, while in the same individual in health it was one to forty-two." Another case showed similar results. He says: "Further observations are necessary before the full significance of these changes can be appreciated." Irving M. Snow (*Amer. Journ. Med. Sci.*, 1904, Vol. cxxviii, p. 966) records five cases in girls between three and ten years of age, and brings forward evidence that the attacks were due to an intermittent hyperchlorhydria. He regards cyclic, periodical or recurrent vomiting in children as not so rare as is supposed. States that it is relatively easy of diagnosis if the vomit be examined, and holds that in some cases the gastric irritability is due to an intermittent hyperchlorhydria, a secretory neurosis, causing the sudden hyperexcretion of free hydrochloric acid and gastric juice. In four of the cases the fluid vomited was apparently pure gastric juice with an excess of free hydrochloric acid and mucus. In the fifth case the hyperacidity was due to combined chlorides. The patients all recovered."

Marfan has described the affection under the name of "Vomiting and Acetomina." He ascribed it to an intoxication, the odor of acetone in the breath and acetonuria being indicative of a toxæmia. Rachford found leucomaines in the urine and believed the condition to be allied to migraine, a kind of lithæmic gastric neurosis. In his cases the recurrent vomiting was replaced by attacks of migraine in adolescence. "First attacks are liable to be mistaken for simple acute indigestion, meningitis, appendicitis, or intussusception. Recurrence and rapid recovery in a few days in most cases establish the diagnosis, which can easily be confirmed by examination of the vomit. The acetone odor of the breath is of some value in diagnosis. Inflammatory or irritative lesions of the kidneys have been noted *post mortem*. The most efficacious treatment appears to be frequent large doses of *bicarbonate of soda*. In dangerous attacks nutrient enemata, chloral by rectum and hypodermics of *strychnia* and *morphia*, may be necessary to tide the patient over a dangerous crisis. Most cases get well. The prognosis as to recurrence is very uncertain, for each attack may prove the last. B.K. Rachford (Archives of Pediatrics, December, 1904, vol. xxi., p. 881) contributes a paper on the subject in which he gives a summary of the affection. He states that a family history of migraine or gout is present in nearly every case and attaches much importance to constipation as an etiological factor. He accepts the intoxication theory and holds that incompetency of the liver is an important factor. H. Battyshaw and R. H. Tribe (*British Medical Journal*, 1905, p. 347) report a case in a girl aged eleven years. She had had periodic attacks of severe vomiting, seven in all, since the age of three years. The attacks lasted on and off

for a month and caused much wasting and weakness. On admission into hospital she was extremely wasted, weighing only twenty-four and a half pounds, listless and taking no notice of her surroundings. The teeth were carious, the neck and body much pigmented and the abdomen hollowed. The urine contained a large amount of acetone and some diacetic and B-oxybutyric acids. Vomiting occurred three or four times a day. She was fed by mouth and rectum, and large doses of *bicarbonate of soda*, 90-120 grains daily, were given. She gained six lbs. in weight in about eight weeks. The pigmentation largely disappeared and the general condition improved. The rectal feeding produced the best result. The writers give an analysis of fifty-five reported cases. F. Langmead (*Brit. Medical Journ.*, 1905, p. 351) reports two cases. One, a girl, was under Dr. D. B. Lees for an attack, from which she recovered. She had had four attacks during the previous eight months. Six weeks later she had another attack, passed into a condition like diabetic coma, had general convulsions and died, with a temperature of 110° F. The liver was found enlarged and in an advanced state of fatty degeneration. Other changes *post mortem* were probably due to inanition, fever, and convulsions. The other case was a boy aged six years, with some mental deficiency. He had had ten to twelve previous attacks. The last was typical, but very severe. He recovered.

I. Porter Parkinson in the *Brit. Journ. of Children's Diseases*, No 4, Vol. II, p. 177, gives a summary as follows: "'Cyclic Vomiting' ('*La Clinique Infantile*, Feb., 1905): Richardiere states the characteristics of this form of vomiting are: Crises of vomiting of food, bilious or watery materials, reproducing themselves with variable frequency and without apparent cause and attended by extreme exhaustion; drawn features; sunken eyes; and retraction of the abdomen. These crises last two or three days to as many weeks and stop suddenly. The breath has the odor of acetone, the temperature is sometimes raised, and occasionally there is jaundice, with pale stools and bile in the urine, the liver being enlarged. The author considers that the liver plays an important part in the production of these attacks, and that the acetonuria is a symptom of hepatic incompetence. Normally acetone is a product of tissue disintegration. It passes into the blood to be eliminated, and it is probable that the liver takes a considerable share in this process of elimination or transformation, and a disturbance of the liver function will naturally diminish its capacity in this respect." Langmead (*Brit. Med. Journ.*, Feb., 1905) in reporting two cases says that acid poisoning occurs there can be but little doubt, but that it is the cause of the vomiting is far from proved. He has found both acetone and diacetic acid

in very evident quantities in the urine of several patients, during whose illness no vomiting has occurred, and in those in whom this symptom occurred he could never detect the acetonuria first. The very frequency of the presence of these products in the urine is against their ability of themselves to cause a comparatively rare condition, such as is recurreut vomiting. And in diabetes, in which acid poisoning often leads to a fatal issue, vomiting is a symptom little in evidence. The probable explanation is to be found in some antecedeut condition causing the vomiting, and directly, or indirectly, the acid poisoning.

It seems to the writer that Langmead comes very near the truth when he says that "the very frequency of the presence of these products in the urine" (i.e., acetone and diacetic acid) "is against their ability of themselves to cause a comparatively rare condition, such as is recurrent vomiting. The probable explanation is to be found in some antecedent condition causing the vomiting, and directly or indirectly, the acid poisoning." Just so no one has yet found out what the cause of the disease is. They may be nervous explosions due to defective metabolism, resembling migraine in adults. Though these patients become so very greatly exhausted, so very much wasted from excessive vomiting and the lack of nourishment, there seems little danger to life. Not many fatal cases are reported. Nothing very characteristic has been found *post mortem.* The attacks are extremely liable to recur. As a rule the younger the patient the more severe and prostrating is the attack. By very careful diet aud regimen between the attacks much may be done for these patients.

I give a typical case. F. D., girl, was born in 1901. When three days old she had a severe attack of vomiting aud could take nothing for twenty hours. She had just begun to take the breast. Nursing stopped, and enemata of water were gvieu. After twenty hours she was given sterilized water for a few hours, then began nursing again. After the attack was over she was much exhausted and emaciated. The mother's milk was plentiful, but watery with no cream. When the child was two months old the mother engaged a strong, red-cheeked young country woman as a wet-nurse for her. The child of this nurse was two months' old. For six months the child remained well. Then the wet-nurse left. After that she had poor nurses and was not well nourished. No form of food seemed to agree quite well with her until she got a good healthy wet-nurse again, when she was eleven months old. The child kept well until she was sixteen months' old, when she had a very severe attack. She was very constipated at first. Small doses of *calomel* and an enema produced free discharges, and melon seeds were passed in the stools.

The vomiting of watery mucus, and at times of a little bile, was very frequent. The child was so exhausted, so emaciated, that she seemed about to die. One-half teaspoonful of iced water or the same amount of hot water would be instantly ejected. She was supported through the attack by peptonized enemata given every five hours. When so very weak a little brandy in milk was given twice by the bowel; after the attack was over she soon regained her health and strength. Her diet was a generous one, but it was carefully planned. The food was prepared by her mother. She was kept out of doors a great deal and she slept in a well ventilated room. From this time on she had attacks of vomiting at intervals of two to three or three and a half months. They usually lasted for three days and left her in a very exhausted condition. She would lose three pounds in three days. The recovery was rapid; still it took some time before she was quite strong and able to take exercise, as her arms and legs were so wasted after each attack. In May, 1903, she had an attack of more than ordinary severity and was greatly reduced by it. She was taken to Mohkanshan in July, where she literally lived out of doors, and she returned in fine health and did not have another attack until January, 1904. One at this time was followed by recurring attacks until the summer, when she went to Mohkanshan; she had an attack just after arriving there. Returned in good health and had no attack for five months till December, 1905. She then had frequent and severe attacks and went to Mohkanshan in June. Early in July she fell down stairs on her head, and the injury was followed by an attack two days afterwards. She regained her health and strength and had no attack for seven months. On the 12th of March, 1906, she had a severe attack, and this was followed by one on the 25th of April that lasted for seven days. She was alarmingly prostrated, and it took her some time to regain her health and strength. On the 20th of May she went to the mountain cottage at Mohkanshan, where she again lived out of doors for five months. Returned to Shanghai in fine health and spirits and remained well until December 8th, when her breath was foul and tongue coated with white fur. Her food was at once reduced to one-third of the usual quantity and she was given $\frac{1}{10}$ grain of *calomel*, and repeat in twenty minutes, at bed time. December 9th, after an enema, she had a rather sour smelling stool of light color. She had some egg albumen and a very small bit of toast in the morning and a cup of water, at noon a small bit of chop minced fine, a small bit of toast and some water. Another enema produced no result. As she complained of pain in her stomach and slight head ache she was not allowed to eat anything at all for supper. She vomited watery mucus during the night, and in

the morning. December 10th an enema of *glycerine* and water brought a little brown mucus. Nothing was given by the mouth, but enemata of pure water were given by the bowel every five hours and were retained. Temperature 98; slept a good deal. On December 11th, still vomiting, was given peptonized milk by the bowel four ounces every five hours; spells of vomiting came on every fifteen to thirty minutes. Had a good night, no vomiting from 6.30 p.m. to 5.00 a.m. December 12th vomited occasionally. Was much wasted and very nervous. Had a good night. No vomiting until 13th, but slept most of the time. December 14th was given a teaspoonful of Mellin's food, which came up. Rectal feeding continued. Slept during the night. December 15th no more vomiting. Began with a teaspoonful of malted food, increased to two teaspoonfuls every two hours. Enemata of water every four hours. Is nervous, excited and restless. Was given *potass bromide* enema, which quieted her and induced sleep. December 16th was convalescent.

This was a foreign child living in a new well-built house with every advantage of food and care. She had no suitable yard to play in, as the house was shut in by surrounding houses and the small yard was damp and gloomy. I have seen one case in a Chinese child of eight years very similar to the one just related.

Treatment: No food or even drink of any kind whatsoever should be given for the first twenty-four hours. Keep the child in bed and quiet in a darkened room. Give four oz. of water by the rectum, four or five times in the twenty-four hours. This relieves the thirst and keeps up the secretion of urine. After forty-eight hours small enemata of peptonized milk may be given three oz. or four every five hours. First wash out the bowel, wait for a short time, and then give the peptonized milk. In only a very few cases with intermittent pulse and extreme restlessness and insomnia will it be necessary to give *hydrate of chloral* and *bromide of potassium* dissolved in brandy and water by the rectum. Usually, however, the child is quiet and sleeps nearly all the time between the intervals of vomiting, which may come on every ten or fifteen minutes. After three or four days, if all vomiting has ceased for twelve or fourteen hours, one teaspoonful of malted food or of Horlick's milk may be given and repeated at intervals of one-half an hour if it is well bourne. Most people begin to feed too early, thus bringing on a fresh attack of the vomiting. Among the prodromata are nervous symptoms, head-ache, pains in the limbs, and especially copious bed-wetting at night. Among the symptoms of a coming attack are a coated tongue, the odor of acetone on the breath and dry, hard, sour-smelling stools, followed by constipation. *Bromide of potassium* given

regularly for three days will relieve the nervous symptoms. Repeated doses of $\frac{1}{10}$ grain *calomel*, followed by enemata, will relieve the constipation. At the same time give ten grains of *sodium bicarbonate* in solution in the cup of milk taken at each meal. If these remedies are used promptly as soon as there are any symptoms of an approaching attack, it can ofteu be averted. Our opportunity comes in the intervals hetween attacks when we can use every posssible means to huild up the child's constitution.

By referring to the case reported by me it will be seen that while the child had good care as to food, clothing, fresh air in the hedroom at night, systematic hathing, the avoidance of sugar aud sweets and a very careful limitation of the amount of starchy foods allowed, "she had no suitable yard to play in, as the house was shut in by surrounding houses and the small yard was damp and gloomy." The child did uot get sufficient exercise in the fresh air and sunlight. It was also noted that whenever the child was sent to the hills at Mohkanshan there was a marked improvement; no attacks coming on while there, and that uone occurred until after several months had been spent in the town house with damp and gloomy surrouudings. While at the hills she simply lived out of doors in the free air and sunshine of summer and autumn. Upon the return to town in cold, wet and gloomy surroundings, the stock of health gained at the hills soon ran down, and after a time the attacks began again. Time and again when the symptoms of an approaching attack were noted, it was warded off hy the prompt use of *bromides*, of small doses of *calomel* to relieve constipation and by giving *sodium bicarbonate* with the milk. Still there would be times when the attack would recur. The most important part of the treatment during the intervals is to let the patient lead an active life in the open air and sunshine. Extreme fatigue and exhaustion should he prevented. This life, together with great care as regards diet and environment, will prevent recurrences which will grow less and less frequent until they finally cease altogether.

Since writing the above I have seen a foreign child, under three years of age, who has heen under the care of a very skilful medical practitioner. In her case attacks began before she was six months' old and recurred frequently. They were very severe indeed and left the child in a very exhausted condition. This child's parents are in good health and their other children are well. The child lives in a good house, has a good garden to play in and her food and regimen are well looked after. She has the best of medical advice, yet the attacks contiuue to recur. My investigations lead me to believe that this disease is more common than

it is generally supposed to be, and that it is not always recognized, but is sometimes mistaken for some other complaint. The ordinary text-books make no mention of it, but any one who will hunt for reports of the disease in the medical journals devoted to children's diseases, will find that much attention is given to it and that efforts are being made to study the disease carefully and to find out the best methods of treatment for its relief.

It must be clearly understood that the disease of which I speak is one of infants and adolescents and that they often outgrow it entirely. It must by no means be confounded with any of the protean forms of dyspepsia in adults, nervous vomiting, hyperacidity, gastralgia and so on. The causes of these are pretty well understood and the proper treatment for them. The disease under consideration is attracting a good deal of study and attention, so that there is reason to believe that it will be better known and its causes discovered at no very distant date.

A STUDY OF THE ETIOLOGY AND DIAGNOSIS OF ENLARGED SPLEEN.

By CHARLES K. ROYS, M.D., Weihsien.

In looking over a file of the CHINA MEDICAL JOURNAL I found this extract from a report sent by Dr. Robert Coltman from Chinanfu in 1887: "Enlarged Spleen. This is the most unsatisfactory affection to treat that I have any knowledge of. Some of the patients have enormously enlarged spleens, pearly conjunctivæ, pale flabby tongues, gradual loss of flesh and ultimate death. Will some of my brethren here in China kindly tell me if they have found a successful treatment?"

Being myself confronted, often several times a day, with similar cases of enlarged spleen, I looked eagerly through the file, hoping that someone had come forward and solved the problem. But the few who referred to it seemed as much in the dark as myself. Twenty years after Dr. Coltman's report, enlarged spleen still holds a large place in our hospital statistics in Central Shantung. Fifty-eight cases, or 14 per cent. of all patients seen by me in the last six months have had this trouble. In the women's dispensary 114 cases have been seen in the last two years by Dr. Margaret B. Bynon, to whom I am indebted for the records of these cases. This makes a total of 172 cases, upon which this study is based. I realize that conclusions based upon cases all seen in one district may have only local value, especially

I. DIED OF GENERAL TUBERCULOSIS.

II. TUBERCULOSIS, BOTH APICES AND LARYNX.

III. TUBERCULOSIS LEFT APEX. Old foul ulcer of scalp, probably syphilitic.

IV. ACUTE INFLAMMATION IN SPLEEN.

in this condition, where climatic and telluric influences are so important. Let us hope that the Association's Committee of Investigation may include this subject in its program, so that by fundiug our knowledge we may do more to relieve the wide-spread suffering and the immense loss of life for which this condition is responsible.

ETIOLOGY.

The average age of these cases was 14 years. Seventy-three per cent. of the cases were under 19 years of age and 30 per cent. under 6 years, as follows :—*

Age:	1-5	6-10	11-15	16-20	21-30	31
Cases:	50	41	31	9	20	21

Sex. Boys and girls seem about equally affected, although here more cases are seen proportionally in the men's work. Thirteen per cent. of patients under 18 years in the men's dispensary had this trouble and only 4.6 per cent. under 18 in the women's side. The reason for this is that children with minor troubles are taken by their mothers to the women's dispensary. The fathers, coming to the men's side, only bring those seriously ill. But, beyond douht, cases are more common in men than in women. The figures here show 1.5 per cent. of all male patients over 18 and 1 per cent. of female. The figures showing cases grouped according to age will explain this. There is a rapid falling-off in the number of cases as the age increases. This is especially marked in the 16-20 group, which is the period when child-bearing begins and when hoys hegin heavy manual labor. More men survive this period than women do the begiuning of child-bearing. In women only 20 per cent. of the cases were over 18, and 80 per cent. below that age. It should be meutioned here that almost without exception the cases are found on careful investigation to have begun in childhod.

The poor are more often affected than the rich. We have only found cases in well-to-do families when there was an evident tuberculous or syphilitic taiut. While not desperately poor this region is over-populated to snch an extent that the food of children of the poorer classes is limited to millet, sometimes a little wheat, eggs rarely, meat none, and rice a luxury which they never see. The proteid content of such a diet is plainly quite insufficient.

The time of year makes very little difference here. From the fourth to the tenth moon (May to October) malaria may be seen here

* Fractions of per cent. not given. Ages are recorded in Chinese fashion, which averages one year greater than foreign style.

occasionally. In this time last year ont of 1,050 patients in the women's dispensary, 41 had large spleens. From the tenth to the fourth moon the non-malarial half of the year, ont of 913 patients, 30 had large spleens. The percentage varies little.

Location. Cases come from city and conntry alike. In one branch dispensary among the hills twenty-five miles south of here 5 per cent. of all patients had enlarged spleen. In our other branch dispensary, thirty miles north-west, near the great marshes bordering the Gulf of Pechili, only 4 per ceut. of patients had enlarged spleen.

Special Etiology.—The predisposing and the exciting canses, their comparative frequency and valne, can best be studied by analysis of cases actually seen. By carefully putting together all available facts which bear npon this perplexing condition, we may in time arrive at its true causes, and so to logical methods of treatment. Mere empirical observation of the effects of treatment is too slow, nncertain, and antiquated a method for the investigation of this complex condition, except as it constitutes the final test by which all theories must be tried. These cases seem to fall into certain groups, not mntnally exclusive, and calling for careful diagnosis.

DIAGNOSIS.

To recognize an enlarged spleen is usually a very simple matter. If we desire only to label the case "Enlarged Spleen," it is easily done. The patient in the recumbent positiou, clothing well opened, abdominal muscles relaxed, balls of fingers of the examining hand impinging on the spleen from the right upward and to the left, will readily locate the distinctive anterior margin, which even when much enlarged still retains its serrations.

But if we wish to find out the actual condition of the unfortunate possessor of this "nnearned increment" of splenic tissue, we confront qnite a different problem, and one that has a number of possible solutions.

The general clinical picture of these cases was as follows: Average age, as stated, 14 years. Youngest, six months; oldest, 59 years. Onset of the disease, almost always in early childhood, although sometimes unnoticed for years. The conrse is steadily downward, and most children so affected fail to reach adult life, as shown by the age statistics given above. The two cases of death we have met with on the men's side occurred one at 17 years (Fig. I) and one at 19 years, aud both from tuberculosis. The subjective symptoms are a sense of weight and heat in the abdomen, sometimes dyspnœa,

epistaxis, or afternoon rise of temperature with sweating, but no chills. On examination there is found emaciation, anæmia, distended abdomeu with dilated veins in epigastrium, and commonly fluid in young children. The heart's apex-beat is seen in the fourth or the third space, in the nipple line, pressed upward by the abdominal contents. There is often a hæmic murmur, loudest over the second left space. The spleen may be only a couple of inches below the costal margin, but usually reaches to the umbilicus, and often an inch, or two inches, to the right of the median line and well down to the crest of the pubis. The liver is often one to three inches below the rib-margin, but cases occur where only the lower right quadrant of the abdomen shows any tympanitic intestine.

The cases have been divided, according to predominating symptoms, into eight groups, as follows:—

1. With characteristic symptoms of tuberculosis. Thirty-one cases, or 18 per cent. Average age, 16 years; youngest, 2 years; oldest, 47 years. There is slight emphasis on cough or expectoration, as children usually swallow sputum. The lungs show moist rales or prolonged expiratory sound at one or both apices, or sometimes only dullness and the dry click of a dormant process. The heart, abdomen, liver and spleen are as described above. The largest spleens were found in this group, and also, in long-standing cases, a peculiar "hour-glass" form of abdomen, due to continued distension of the upper segment by the large liver and spleen. (See Fig. V.)

2. With symptoms of rickets, malnutrition or scurvy. Twenty-eight cases, or 16 per cent. Average age, 4 to 5 years; youngest, six months; oldest, 11 years. There was a history of improper or insufficient food, constipation, sweating of the head, but rarely the pronounced bone symptoms seen in crowded cities at home. The life of the Chinese child, spent so largely in the open air, seems to prevent this development, however poor his food may be. But we often see the anterior fontanelle open till the second or third year, together with the rhachitic "rosary" on the chest, and that flaring outward of the lower ribs which produces "Harrison's groove" in the sides of the thorax. The abdomeu is usually much distended, so that the edge of the spleen is hard to locate, and it often contains fluid, or there may be general dropsy. The liver and spleen are small in proportion to the distention. Cancrum oris is very common in these cases, as a terminal condition, ten of this group having this fearful end. Foul and bleeding gums and soreness of the mouth are often seen.

3. With symptoms of hereditary syphilis. Eight cases, or 5 per cent. Average age, 17 years; youngest, 3 years; oldest, 42 years. The history of the parents can sometimes be obtained, but the best indication is extensive scarring in childhood of the scalp, body or limbs, or at the angles of the mouth; sometimes peg-teeth may he seen. In older patients there is often a remarkable stunting of the growth. One case, 31 years of age, had the size and development of a boy of 10 or 12 years, a treble voice and no pubic hair.*

4. With history or symptoms of malaria. Five cases, or 3 per cent. Average age, 25 years; youngest, 15 years; oldest, 36 years. These had malaria as follows. A boy of 15 had it for three months, four years ago. A boy of 17 had it for some years past annually. A man of 29 had it for one month, nineteen years ago. A man of 36 had it for one month, ten years ago. A man of 32 has had it for three years past annually. This patient says that he is certain his spleen was not enlarged before these attacks of fever began.

5. With symptoms of ankylostomiasis. One case, 47 years of age. (Fig. VI.) This man came in for the removal of large internal hemorrhoids. He was found to be very anæmic and his spleen about four inches below the costal margin. He was kept on *cod-liver oil* and Blaud's pills till his hæmoglobin had risen to 70 per cent. After operation (clamp and cautery method) he had a severe hemorrhage from the rectum, and his hæmoglobin dropped to 30 per cent. Then his stools were examined, the characteristic ova of uncinaria found, and he was given repeated doses of *thymol*. His hæmoglohin is now 70 per cent. one month after operation.

6. With localized acute inflammation in a chronically enlarged spleen. One of these cases was a personal one, the other was kindly detailed to me by Mrs. R. M. Mateer, formerly Dr. Madge Dickson, in charge of the women's medical work here. The first case (Fig. IV.) was a boy of 18, who had had enlarged spleen for years. For some years he had a cough with white expectoration. His lungs showed harsh and prolonged expiration at the left apex. His face showed a marked hectic flush; he was having an afternoon fever of 101° to 102° F. with profuse sweating. His left rectus was rigid over the spleen, which was enlarged past the median line and was very sore to the touch. His hæmoglobin was 60 per cent. and his leucocytes were 17,200. After being under observation a few days he grew impatient

* Manson (1) attributes this to malarial cachexia, but Emmett Holt (2) and others consider it as due to hereditary syphilis. The latter was certainly present in the case mentioned here.

V. STUNTED GROWTH.
Age 36 years. Hour-glass form of abdomen. Dotted line shows spleen on arrival. Black line after one month of treatment.

VI. ANKYLOSTOMIASIS.
Black line shows spleen two months after treatment.

and left, since when nothing has been heard from him. The other case is pleasanter to report. It is that of a girl, 23 years of age, graduating this year from the high school at Weihsien. Her father is a native pastor, and the family are fairly well-off and intelligent, but several have enlarged glands, cough, and other evidences of tuberculosis. One brother had a very large spleen, diminished under treatment by German doctors in Tsingtau. At 10 years of age she began to have trouble with her spleen, which was already very large. For five years it grew steadily worse. She became very much emaciated and anæmic and had no periods. In 1900 an abscess formed just above the umbilicus, pointed, and discharged large amounts of pus for over a year. The size of the spleen was said to be much reduced. She was seen by Mrs. Mateer in 1901. A probe then passed six or eight inches into the region of the spleen. Sinus was packed and healed from the bottom. *Iron* and forced feeding were kept up, and the flesh and strength gradually returned. Later a hernia, the size of the fist, appeared. It was reduced, tightly strapped, and a truss applied. After some months the hernial opening closed. This girl was able to take a long, hard course of study, and to graduate this year seemingly in perfect health. Manson (3) explains these abscesses as due to broken-down hæmorrhages in the splenic tissue.

7. Cases with many intestinal parasites. Six cases, or 4 per cent. Average age, 9 years; youngest, 2 years; oldest, 15 years. The chief complaint in these cases was the frequent passing of ascarides. Occasionally there was some abdominal pain, but no symptoms of toxæmia.

8. Undifferentiated cases. Ninety-three cases in all, where the data could not be obtained from the records, or from the patient, sufficiently for classification. The ignorance and unreliability of patients, and the lack of time for careful study of cases as they appear, make this class painfully large.

DIFFERENTIAL DIAGNOSIS.

Having tried to show what many of these cases are, let us see also what they are not. The mystery which surrounds this affection, in spite of our best efforts, is due to the large number of obscure conditions associated with enlarged spleen. If we can eliminate a few of these it will clarify the whole situation. To do this conclusively is more than any one observer can accomplish, even under most favorable conditions and certainly more than has been done by the study of these cases. We can only tell what *we* have *not* found and hope to hear from others on this whole subject.

First. No case gave symptoms, and only 3 per cent. gave any characteristic history of malaria. In no case was the malarial parasite found, out of a dozen suspicious cases examined, and the writer may claim a bowing acquaintance with the malarial parasite, having bowed long and often over interesting individuals of that species in the home-land. Of course most cases begin in childhood, when attacks might not be observed, or have been forgotten; and the malarial parasite is known to disappear from the finger-blood in many cases of cachexia. Yet this dearth of evidence of malaria, together with the comparatively non-malarial character of this region, and the remarkable frequency of enlarged spleen, seems significant.

Manson says of enlarged spleens: (4) "Wherever they are common the district is malarious and therefore unhealthy, perhaps to Europeans deadly, and should be looked upon as extremely unfavorable for residential purposes." This is the accepted view. Yet foreigners have resided in this region for twenty-five years, and so far as known there have been only two cases of the disease, both of whom suffered from it before arriving in this region. No foreign children, born here, have had malaria. Again, the distribution of cases is not that of malaria. In the hills to the south of here a larger proportion of patients had enlarged spleen than in the marshy region to the north, from which come most of our cases of malaria. This may be accounted for by the fact that to the south the land is largely in millet, while to the north the land is richer and the people better fed. The fact that the condition is common among the poor, and rare among the rich and well-fed, unless with some tuberculous or syphilitic taint, is another argument for giving a large place to malnutrition as an exciting cause, whether it be from insufficient or unwise feeding in childhood, or due to intercurrent disease later in life.

Manson himself, at the close of his chapter on malarial cachexia, makes this significant statement: "Tubercular and syphilitic disease not unfrequently concur with malaria; in fact the latter may powerfully predispose to local manifestations of the two former, and vice versa a complication as to which the practitioner must be on his guard." So it may be that malaria is to be cousidered as merely a possible predisposing cause in many of these cases, and our treatment adapted accordingly.

Second. None of the cases examined showed anæmia of the primary type, or symptoms of the idiopathic blood-diseases so often associated with enlarged spleen. The average of ten estimates of hæmoglobin taken at random, where patients would stay long enough, was 50 per cent. by the Tallquist method. The red cells in these cases were fairly

uniform in size, shape and staining ; only two cases showing poikilocytosis and one a few normoblasts. The average number of red cells would be about 2 1-2 to 3 million. The average leucocytosis was 13,000, but this included several cases with suppurating tubercnlous foci, local inflammation iu the spleen, and other causes for increase in leucocytes. The worst anæmia was found in those cases of long duration, with stunted growth, history or scars of syphilis, and sometimes also sigus of tuberculosis. In one such case the hæmoglobin was below 30 per cent., but the anæmia was of the severe secondary type. In most cases hæmogenesis seems fairly well performed by the subsidiary organs even after the spleen is out of commission, as we know can be done after splenectomy. The breakdown comes after severe strains like preguancy, or complicating conditions, in which the blood is used up faster than it can be supplied by the limited resources of the patient. It is to the discovery, prevention, or removal of these complications that a large part of our energies should be directed.

Third. Intestiual parasites, while very frequent in the dilated and atonic iutestines of these cases, have little causal value. Ascarides of course are present in most cases, but give symptoms in few. No cases of toxæmia were observed. Ankylostomiasis was detected in one case, as recorded above. Repeated doses of *thymol* have made some improvement in this case. It certainly should be part of our routine treatment to detect and expel these unbidden guests, who doubtless add their share, whether small or large, to the burden of their long-suffering host.

Fourth. Splenic auæmia and primitive spleuomegaly are noncommittal terms which might he applied to these cases. As described by Osler, (5) however, this condition occurs chiefly in adult males, and is characterized by hæmorrhage from tbe stomach and bowels. Hæmorrhage occurred in only one case of this series, and could be easily traced to large internal hæmorrhoids.

Fifth. Kala-azar is another musical uame associated with enlarged spleen. This may be a typical cachexia, cause unknown, or it may be an infection with the Leishman-Donovau bodies through the bed-bug as an iutermediate host, as suggested by Rogers (6). The Leishman body was found in a case in Tsingtau (a Chinese) in June, 1907, hy Prof. Mattini, of the German Gövernment Medical Staff, and Dr. Dipper, of the Faber Krankenhaus. I am indebted to the latter for information about this case and also for access to Leishman's own article upon this subject (7). This latter, with its beautiful color drawings of the parasite, should be seen by all who wish to understand this interesting

disease. As I do not know that it has appeared in English, a brief abstract is inserted here.

Synonyms given are dum-dum fever, tropical splenomegaly, cachetic fever, non-malarial remittent, etc.

Etiology.—Cause thought to be a parasite belonging to the flagellæ, not a trypanosome, called by Laveran the "Piroplasma donovoni," by others the Leishman-Donovan body. Its life-cycle is not fully known. (Rogers' hug-theory is a later development. R.) No racial immunity. By no means rare in English soldiers in India. Many deaths thought to be due to dysentery, etc., are probably due to this cause. The disease increases in frequency during the rainy season, and deaths are common at the end of the rains.

(*Distributiou* of the parasite.—Assam, Ceylon, Madras, the Soudan, German East Africa, the Philippines, Central China, Shantung. R.)

Pathology.—Spleen, liver, mesenteric glands, bone-marrow, etc., show the parasite. Sections of liver and spleen show "endothelial macrophagi," large cells full of the parasite. Yellow marrow of long bones changed to red. Parasite found in large mono-nuclear cells. Leucocytes at first increased, later a distinct leucopenia, especially of the polynuclears. (German observers believe the disease to be a "malaria of the white blood cells." Parasites are frequently found in the white cells, rarely in the red. R.)

Symptoms.—Incubation, three weeks to one month. "Undulant type" of fever; at first, 103°-104° F. remittent or intermittent, with periods of low temperature; later, 101°-102° F. In cachetic stage, sometimes below normal for days.

Spleen often enlarged past the median line and to the pubes. Liver moderately enlarged. Transient œdema of legs common. Ascites, or fluid in pleura or pericardium not uncommon late in the disease. Dysentery and diarrhœa common terminations.

Blood-examination.—At first, leucocytosis (with high temperature). Later a marked leucopenia, especially of the polynuclear cells. The count may be 1,000-2,000, or in severe cases 700-800. Polynuclears may be only 62 per cb. mm. Parasite, found best by splenic puncture, has two chromophilic bodies: one small and one large. Few in red cells, numerous in white.

Prognosis.—Bad if leucocytes are below 2,000. If they increase prognosis is good.

Treatment.—Quinine of little value. *Arsenic, iron, nux vomica* no better result. Good nursing and good nourishment are most important.

Differential diagnosis.—A decisive factor in suspected cases should be the leucocyte count. Dr. Dipper's case showed 2,000 per cb. mm. If after months or years of the disease the count is normal or excessive, the presumption is strongly against Kala-azar. If there is leucopenia the finger-blood should be searched, and in selected cases the spleen punctured, or better perhaps the liver, as a less dangerous procedure.

None of the ten counts made here showed a leucopenia; the average being above rather than below normal. There is nothing of an epidemic nature about the cases seen here, or of that devastating progress seen in Assam, where "the disease passes over the country like a serpiginous ulcer, advancing, so to speak, at one edge and healing at the other" (Manson). The peculiar undulant type of fever, as seen in Malta fever,

has not been observed here. Still, as the parasite is known to exist here, a certain proportion of enlarged spleens may be due to this infection. What that proportiou is, remains to be fouud out. It is hoped that numerous observers in many parts of the country will attack this problem, and that this article may at least suggest lines for such investigation.

Conclusions.

1. No one disease, and certainly not malaria, can be assumed as the only cause of enlarged spleen in this region.
2. Every case should be judged by itself and the actual condition of each patient understood if possible, bearing in mind the probable causes in order of frequency.
3. Whatever the primary cause or causes, the resulting cachexia tends to prolong and aggravate itself by the establishment of a "vicious circle," wherein the malnutrition of the patient keeps up the congestion of the spleen (as commonly seen in rickets), and the congested and ultimately hypertrophied spleen, clogging the portal circulation, prevents the proper nutrition of the patient.

Treatment.

A full discussion of treatment is outside the scope of this article. This much may be said, however. If the above last mentioned conclusion is true, then the best way to break up the "vicious circle" seems to be nourishing the patient. The treatment of malnutrition is *food*, not *quinine*, *arsenic*, or tonics, which are uot food, but *cod-liver oil*, *iron*, and plenty of good, digestible proteids, which the ordinary diet of patients so largely lacks. The pure tonics should not be our main reliance. Leishman(8) emphasizes the great importance of nursing and good feeding in cases of kala-azar, and we have found it equally evident here for all forms of enlarged spleen from whatever cause. This plan of treatment has been tried here on comparatively few cases so far, but has shown some interesting results. The girl who recovered after abscess of the spleen, was treated in this way with *iron* and forced feeding. The two cases whose photographs (Fig. V. and Fig. VI.) show reduced size of spleen, took *cod-liver oil*, Blaud's pill, and four to six eggs a day, usually eaten raw, with all the other food they could digest.

It is impossible to keep track of the great majority of these cases, and few of them, when alone, have the patience to continue treatment for the weeks or months necessary to secure results. But if we have clear in our own miuds some method of procedure we may succeed in convincing the patient or his parents of its value, and much may be done to help these thousands of sufferers to an easier life and to prevent the complications which so frequently carry them off.

I have to thauk a number of my colleagues in Shantung and Chihli for replies to a personal letter upon this subject, sent out May 5, 1907.

Dr. C. F. Ensign, of Taianfu, reports about forty cases in the last two years, nearly all under eighteen years, most of malarial origin, a few with rickets, and *all* with intestinal parasites. His treatment, after expelling parasites, is *iron* and *quinine*. He says: "I now think better results come from an increase of *iron* with less *quinine*." Dr. Elma E. Fleming, of Ichowfu, says that most of her cases are in children, and seem to be of malarial origin. She calls attention to the frequency of noma in this condition and to its fatal character in these cases. Dr. C. H. Lyon, of Tsiningchow, says that the average age of his cases is about ten years. They are of malarial origin; a few have symptoms of rickets. He has used *quinine*, *arsenic*, *iron* and *cod-liver oil*. The two former are not well-borne in advanced cases. The latter have seemed to help some cases. He advises patients, where possible, to go to the mountains for at least six months. Dr. J. H. Ingram, of Tungchow, Chihli, reports a case cured by *cod-liver oil*. He says: "My own opinion is that the cause is malnutrition. Malaria seems only an aid in developing the anæmia and not the primary cause." Dr. Thos. C. Paterson, of Ts'oup'ing, has found these cases extremely resistant to treatment. "Occasionally *arsenic* (itself, or combined with *iodide of mercury*) produces surprising effects." Mrs. R. M. Mateer, M.D., of Weihsien, reports two cases cured: one with *iron* and forced feeding (referred to above) and another with *iron* and *cod-liver oil*. Dr. F. F. Tucker, of P'angchuang, reports about seventy cases in the last two years; average age ten years, and a majorlty of malarial origin. *Quinine* and *iron* have a favorable effect in about one case in ten.

REFERENCES:—

(1) Manson. Tropical Diseases, p. 112.
(2) Holt. Diseases of Infancy and Childhood, p. 1,065.
(3) Manson. Tropical Diseases, p. 116.
(4) *Ibid*, p. 116.
(5) Osler. Principles and Practice of Medicine, 4th ed., p. 843.
(6) Rogers. *British Medical Journal*, Mar. 9th, 1907.
(7) Mense. Handbuch der Tropenkrankheiten, B. III, "Kala-azar." (Barth, Leipsig, 1906.)
(8) *Ibid.* Leishman, "Kala-azar."

Rhein's Specific Remedy for Diarrhoea and Dysentery.—"The following is the formula of a preparation of simaruba much used in Shanghai, and there known as 'Rhein's Specific Remedy for Diarrhoea and Dysentrey.' I understand that the formula was purchased by the Shanghai municipality for a considerable sum of money, so highly was it thought of by the European community of that city. Simaruba bark, three ounces; Chinese cinnamon, one ounce; boil in three quarts of water and allow it to evaporate down to one pint. When cool, strain into a braudy bottle, add three tablespoonfuls of good brandy, and fill up by pouring cold water over the bark in the strainer till the bottle is full. Dose: A wineglassful three times a day."—Tropical Diseases, Manson, Fourth edition, p. 454.

NOTES ON THE URINE OF TUBERCULOUS AND NON-TUBERCULOUS INDIVIDUALS IN SOUTH CHINA.

By G. DUNCAN WHYTE, M.B. (Edin.), Swatow.

What disheartens one most in any endeavour to carry out research is the tremendous amount of negative work that must be done before any positive result is obtained.

How many blood films one has examined in obscure cases, searching for some alteration in number, proportion or structure of red or white cells which would help in nosology! Sometimes one sees a Will o' the Wisp and follows it half a night only to find that it *is* an *ignis fatuus*, and not a true pathological entity.

The following is submitted to the readers of the CHINA MEDICAL JOURNAL, in the hope that the publication of some negative results may save others from repeating similar analyses and thus free them for work that gives more promise of being fruitful.

One was led to make the examinations that are referred to below by a desire to facilitate the differentiation of the secondary anæmia of phthisis from other conditions associated with improverishment of the blood; a fairly reliable test was required by which one could diagnose cases where there was no sputum and the physical signs were still indefinite. One authority writes: "The loss of phosphates by the urine takes place in quite the early stages of phthisis, and is also very considerable. It may indeed be regarded as a differential test as between pseudo-chlorosis attending tuberculosis and genuine chlorosis, in which malady the urinary phosphates are actually diminished."*

The statistics to be adduced may be divided under three headings, viz., those relating to (a) weight of phosphates, expressed as phosphoric anhydride (p. 205) per hundred cubic centimetres of urine, (b) weight of phosphoric anhydride in one hundred parts urinary salts, (c) total weight of phosphoric anhydride excreted daily.

FACTS RELATING TO THE WEIGHT OF PHOSPHORIC ANHYDRIDE CONTAINED IN 100 CCMS. URINE.

In the routine examination of dispensary cases it was found that in seven cases with tubercle bacilli in their sputum the average percentage of phosphates in the urine was .184, and only one of those cases had less than .16 per cent. On the other hand, out of twenty-four cases that

* Cornet in Nothnagel's Encyclopedia of Practical Medicine, article Tuberculosis, says: "The loss of flesh is accompanied by phosphaturia, as shown by Benekc, de Renzianh Senator. According to Teissier the phosphaturia vanishes with the advent of the period of cachexia. Stokvis attributes no diagnostic importance to this symptom."

were not tuberculous the average excretion was .106 per cent., and only two of these cases had as much as .16 per cent. These facts were suggestive, so further investigations were proceeded with, and eighteen more cases in the tuberculous class were found to give an average of .154 per cent., while twenty-one more non-tuberculous cases only gave .104 per cent.

(B.) FACTS RELATING TO THE PERCENTAGE OF PHOSPHORIC ANHYDRIDE IN THE URINARY SALTS.

In criticism of the above facts one would suggest that the percentage of phosphates will depend (apart from considerations of diet) on the concentration of the urine, and will, therefore, *cæteris paribus*, be increased in fever, diarrhœa, or other conditions that concentrate the urine by removing fluids from the body. One would enquire whether, in urines of equal conceutration, that from a phthisical patient shows a greater percentage of phosphates than that from a non-phthisical patient.

One method of getting an answer to this question is to find the total weight of solids, in grammes, in one thousand cubic centimetres of urine and the weight of phosphates in a similar bulk of urine, and then work out what percentage of the solids the phosphates form.

Considering the amount of trouble required to obtain these figures the fact that their value is purely negative is most disappointing. An analysis of forty-six cases showed that in the phthisical ones the phosphates varied from 1.6 per cent. to 5.58 per cent. of the total solids, and averaged 3.99 per cent., while with the non-phthisical cases the average was 4.51 per cent., the extremes beiug 2.14 per cent. and 8.2 per cent.

The same point—the relation of phosphate excretion to concentration of urine—may be investigated by finding the percentage of phosphates in different uriues of the same specific gravity. Thus iu a series of urines, ranging in specific gravity from 1016 to 1020 there was found to be an average of .16 gms. of phosphoric and anhydride (per 100 c. cms.) in the phthisical cases, as against .17 in the non-phthisical ones. A similar series of urines of sp. gr. between 1010 and 1015 showed: phthisical cases .09 gms. and non-phthisical .1 gm.

We may therefore take it as being clearly proved that the percentage of phosphoric anhydride in the urine in cases of phthisis does not differ appreciably from that percentage in urines of equal specific gravity, obtained from healthy people or patients suffering from non-tuberculous diseases.

(C.) FACTS RELATING TO THE TOTAL WEIGHT OF PHOSPHORIC ANHYDRIDE EXCRETED DAILY.

The question of the total daily phosphatic excretion had still to be considered, and for that purpose analysis of the whole of the urine passed in twenty-four hours was required.

To form a suitable basis for comparison, analyses were made of the urine of twelve healthy lads (hospital students and hospital and domestic servants). The urine of the whole twenty-four hours was collected in clean wide-mouthed glass bottles and examined before decomposition had set in. Having collected the urine it seemed a pity to make no further use of it than to estimate the phosphates, and so the specific gravity, chlorides, sulphates, and urea were also estimated. I regret that in this series of examinations no attention was paid to *Uric acid* and the Purin bodies generally.

The following table gives the average of the twelve healthy cases, with the maximum and minimum amount of each constituent that was found in the course of the analyses.

Lest twelve healthy lads should seem too limited a number of cases to form a suitable basis for comparison I have inserted the average of the analyses of ten patients suffering from conditions other than tuberculous diseases, nephritis, or cardiac affections with œdema.

The table also gives the "book average," that is, the figure given in the text-books as being approximate for a healthy individual at home; also the figures for one case which I did not feel justified in including along with the twelve cases owing to the wide divergence this lad's urine showed from all the others.*

TABLE A.

	Amt. ccms.	Sp. Gr.	P O gms.	Cl. gms.	Urea gms.	Total Solids gms.
Minimum.	1300	1006	.845	8.2	8.	28
A'ge of 12 healthy lads.	1780	1014	2.007	12,63	13.76	53.57
Maximum.	2500	1018	2.88	19.8	19.8	63
A'ge of 10 non-tubercul. cases.	2100	1009	1.79	14.24	12.11	47.58
Book a'ge	1450	1015-1025	2-3	12	25-40	60-70
Extra case	1500	1026	3.75	25.5	31	91

NOTE.—The increased bulk of the *patients'* urine, compared with the *students'* may be due to the diminished amount of exercise they were able to take, and consequent diminished loss of fluid through the skin. The absence of active exercise, and consequent diminution of katabolic metabolism would (in conjunction with the poverty of their diet) explain the smaller amount of urinary salts.

* The only explanation of these figures I can submit is that the lad—with the healthy appetite of a hard-working boatman—availed himself unduly of the facilities which his brother's generosity provided for over-eating himself with unusual foods on the occasion of his first visit to the Fu city.

The next table shows the average urinary content of six tuberculous cases. Unfortunately several cases of phthisis have had to be excluded from this series, because they were undergoing dietary treatment, which had a marked effect on their urinary excretion. The analysis from one of these cases—typical of others—is added to the table to illustrate the effect of a diet of milk, eggs, and raw meat on the amount of urea in the urine (which one may doubtless regard as having some relation to the amount of urea circulating in the blood).

The temperature charts of these six cases lie before me now. In one of them the temperature only once exceeded 99° and rarely fell below 97°.5; three others ran between 98° and 103°, while the other two never came below 99° and sometimes exceeded 104°.

TABLE B.

	Amt. ccms.	S. G.	P O gms.	Cl. gms.	Urea gms.	Total solids.
Minimum	300	1012	.75	5.0	6.5	15.4
Average	733	1017	1.20	7.55	9.61	27.82
Maximum	1300	1022	1.615	11.7	12.8	36.4
Case under zomotherapy	900	1032	3.06	7.2	25.2	67.2

These figures may be taken to prove that the daily excretion of phosphates in cases of advanced phthisis is as a rule less than that of a healthy individual.

SUMMARY OF CONCLUSIONS INDICATED BY THE FOREGOING FIGURES.

(A). In the cold season of the year the urinary excretion of a native of South China is somewhat larger in amount than that of an "average man" at home, but, as the specific gravity is distinctly lower,* this increase in volume is not accompanied by any increase in solid matter. On the contrary though the amount of phosphates and of chlorides approximate to the home figures, the amount of urea comes short of that standard by about one-half.

(B). Patients suffering from advanced phthisis exhibit a urine which is diminished in bulk, and (despite an increase of density) in the total daily amounts of phosphate, chlorides, urea, and the urinary salts generally.

(C). There seems reason to believe that this concentration of the urine is present in fairly early stages of the disease so that an increased specific gravity of the urine may suggest phthisis to the physician, even

* Through the kindness of Dr. Layng, Swatow, I am permitted to publish the following results of estimations of the specific gravity in 392 different cases. Of these over a hundred were dispensary shop assistants, domestic servants, gig-men, etc. The remainder were mostly applicants for life insurance, some of whom, knowing that a low specific gravity was not desired, took means to raise the Sp. Gr. by abstaining from much tea drinking, etc. In the whole of the dispensary assistant class the Sp. Gr. was below 1020, and in 69 per cent. it was below 1015. In the "candidates for insurance" class it was below 1015 in 54 per cent. and above 1025 in only 1 per cent.

A CASE OF YAWS.

though the patient is unaware of the existence of fever or night-sweats. An estimation of the phosphates will yield no more valuable information than that yielded by the urinometer.

(D). The diminished excretion of urea—which one would naturally expect from a consideration of their ordinary dietary—is important, particularly in view of the extent to which the Chinese fall victims to the tubercle bacillus and of the beneficial effects of pure urea and a highly nitrogenous diet even in cases of advanced phthisis.

In carrying out these investigations I received considerable help from one of my students—Kuan Hsieu-t'ing—whose manual dexterity and mental alertness lightened the labour and increased the interest of these and many other investigations. Our labours will not be wasted if these notes are a help to those working on similar lines, a stimulus to others to investigate kindred problems.

A CASE OF YAWS.

By J. PRESTON MAXWELL M.B., F. R. C. S., Amoy.

The old controversy of the relation of yaws to syphilis may not be yet at an end, but the views of those who hold that they are distinct diseases, possibly caused by a similar parasite, are strengthened by the occurrence of cases similar to the one related below.

In July, 1906, the father of the patient returned from Singapore with an attack of yaws in full swing. It had developed shortly before his leaving for China. He was very careless and the towel which he used after washing his body was also used for wiping his boy's face and neck.

In November, 1906, the boy, a lad of eight years of age, began to suffer from malaise, and a pustule appeared, according to his grandmother's description, above the right temple. His condition grew worse, and in the early part of January, 1907, he was brought to the hospital, but nothing was said about the history of the case. There was a raised ulcerated patch at that date on the right temporal region, and over the forehead and arms were shotty papules which made one suspicious of an atypical attack of small-pox. He did not return to hospital for two months and then presented the typical appearance of a case of yaws. In fact it was so typical that a mere glance at the patient was sufficient for diagnostic purposes. Under treatment with Hyd. c. Creta the case improved, but he was only brought at rare intervals for more medicine, and on September 19th, 1907, there were still a few spots which retained the usual characteristics on arms and legs.

The photograph, which was most difficult to obtain, owing to the fears of the grandmother, shows the appearance of the upper half of the body in March, 1907.

CASE OF LIGATURE OF COMMON FEMORAL ARTERY AND VEIN.

By R. T. Booth, M.B., B.Ch., Hankow.

The patient came with granulomatous condition of penis, a mass of enlarged glands in right groin, and an ulcerated cavity in left groin where the gland had completely disappeared, leaving a cupshaped depression.

Complete amputation of penis and double castration with enucleation of glands in right groin was effected, and then before removing the patient from the table the cavity in the left groin was lightly scraped. It was found, however, that the ulceration had affected the vessels, and a tremendous flow of blood from the femoral vein resulted. This was stopped with some difficulty, owing to the manner in which the "welling" blood obscured the exact seat of the hemorrhage. Forceps were left on and the patient put back to bed. After forty-eight hours the forceps were carefully removed, and no further hemorrhage took place. It was noticed, however, that the wall of the artery showed a tendency to bulge in one spot which was bluish and thinner than the rest. Graduated pressure was applied, and for forty-eight hours all went well. One day, fortunately when I was at hand, the nurse noticed hemorrhage through the dressings, and I quickly cut away the bandages and put several forceps on the bleeding patient. At the time I discussed with myself, unfortunately having no one else to consult, the advisability of immediately ligaturing the femoral artery, but decided to wait, for the following reasons: 1. The patient was weak from loss of blood. 2. Septic condition of parts. 3. I knew I had not completely occluded the femoral artery with the forceps, merely diminishing by one-half at least the flow of blood through the vessel. This being so I felt that the longer I delayed the ligature the better chance there would be of the collateral circulation being established. The blood via the femoral being diminished by at least one-half, the collateral vessels would dilate to allow the other half of the blood to pass through them.

Under the circumstances I postponed operation for forty-eight hours, and then, putting patient under *chloroform* again, I removed the forceps

and proceeded to ligate. With the assistance of Dr. Cundall, who arrived that day in Hankow on his way to Tehngau, I succeeded in putting ligatures on both artery and vein. It was exceedingly difficult, owing to the matted condition of the parts, to find the vessels above where they had ulcerated, and owing to the septic condition I was afraid to attempt ligature of the iliac vessels for fear of affecting the peritoneum. After some careful dissecting, Poupart's ligament was displayed and retracted upward, and ligatures were then placed on both artery and vein. In order to avoid any further trouble from hemorrhages due to a return flow from below, in the artery, the femoral sheath was opened below and the artery again ligated. The femoral vein as it lay beside the artery was of course also ligated.

After dressings were applied the patient was put back to bed; the leg being bound in cotton wool, and hot water bottles being placed around to preserve the warmth of the limb. Needless to say I anxiously awaited the re-establishment of the circulation in the limb. No œdema, no sign of deficient circulation as shown by color or coldness, appeared, and the patient has gone on steadily improving. He is still in the hospital, and the ulcerated place is slowly and steadily healing.

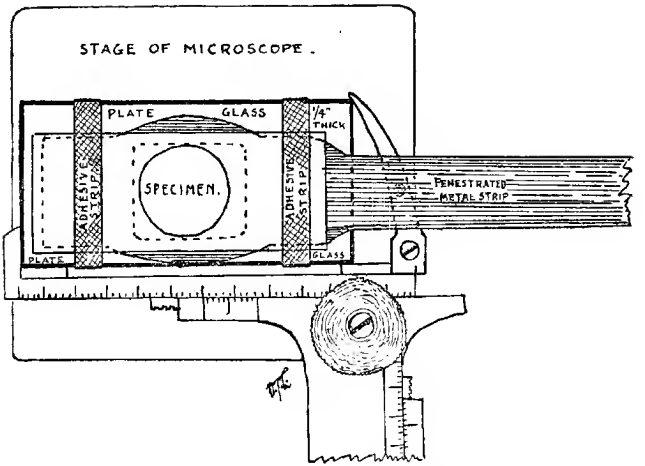
The absence of œdema, after ligature of femoral vein, and the absence of coldness and cyanosis, after ligature of femoral artery, I attribute to the facts mentioned above. During the time when the forceps partially occluded both artery and vein, the collaterals had opportunity to dilate, so that when on ligature of the main vessel the entire supply of blood was cut off, they were able to convey sufficient arterial blood to keep the limb healthy and give passage to sufficient venous blood to prevent swelling and œdema.

AN INEXPENSIVE WARM STAGE FOR THE MICROSCOPE

By O. T. Logan, M.D., *Changteh.*

The accompanying drawing will, I think, show a very satisfactory warm stage that will appeal to those who possess microscopes, either without mechanical stages or with mechanical stages of the superimposed type, such as the one in use by the writer (Bausch and Lomb, BB8.).

Having had much trouble in using the classical fenestrated metal strip, owing to the difficulty in shifting from one field to another, it occurred to me one day to utilize a piece of broken plate glass that was lying handy, after warming it, instead of the metal strip. The



experiment was satisfactory, but I found that the plate glass soon cooled off and a good deal of time was lost in heating it again. It finally occurred to me to combiue the two—the plate glass and the metal strip—and I found that by using a piece of plate glass about the size of the largest slide that can be accommodated by my mechanical stage, the result was all that could be desired.

The method is as follows: The plate glass, which should be about one-fourth of an inch thick, is placed on the microscope stage, and upon this is placed in turn the fenestrated metal strip and the slide containing the specimen. The metal strip and slide are bound firmly onto the plate glass, which gives a steady auchorage.

If it is desired to use this sort of a warm stage on microscopes that do not have mechanical stages it is only necessary to remove the two clips from the top of the stage and proceed as above, with this difference: the piece of plate glass should be nearly as large as the microscope stage, so that the anchorage of the metal strip may be as firm as possible, thus avoiding vibration when changing fields.

It is hardly necessary to say that some sort of a warm stage is absolutely necessary when examining for *amœbæ*, and it is hoped that this description will make that work easier and more satisfactory for others who are engaged in work similar to that of the writer.

This description is offered for simultaneous publication in THE CHINA MEDICAL JOURNAL and *The Journal of Tropical Medicine and Hygiene.*

Reports of Customs Surgeons.

NOTES SUR UN CAS D'ANÉVRYSME DIFFUS DE LA RADIALE.

Par le Dr. ABBATUCCI.

Le Né Hiaug-hy-tchang sujet Chinois venant de Kin-tcheou se présente à la consultation le 11 Novembre 1905, porteur d'une volumineuse tumeur de l'avant-bras droit, dout il nous prie de le débarrasser. C'est un homme de quarante ans, de constitution moyenne, mais aux traits emaciés par l'abus de l'opium.

D'après ses reuseignements, l'affection date de trois ans. C'était au début une petite tuméfaction insignifiante, du volume d'une uoisette à peine, apparue un jour brusquement sans cause appreciable, sans traumatisme de la région. À la suite d'un vigoureux massage pratiqué par un rebouteur Chinois la poche eclata soudain et depuis lors, progressivement, l'avant bras augmenta de volume.

Les dimensions actuelles de la tumeur sont considérables et peuvent être comparèes à celles d'une tête de nouveau-né. Toutefois, elle n'est point sphérique, mais plutôt ovoidale à grand axe longitudinal commençant à un travers de doigt du pli du coude, pour se termiuer à 6 centim du poignet. Elle parait occuper toute la loge antero-externe de l'avant-bras, empiétant néanmoins davantage sur le côté radical du membre. À son point culminant, on constate une ulcération cutanée circulaire du diamètre d'une piéce de 5 francs. Sa cousistance est nettement rémittente. Son auscultation ne révéle rien de particulier, mais en appuyant convenablement le sthétoscope sur l'humérale ou la carotide droite ou même par une compression digitale modérée de ces artéres, on entend ou on perçoit une sorte de bruissement, de thrill vibratoire. Le pouls radial est impossible à découvrir, la cubitale à peine perceptible. Les mouvements de flexion et d'extension du poignet et des doigts sont à peu près conservés ; le mouvement de pronation et de supinatiou du membre sont abolis.

L'âge de la tumeur,l' absence de fiévre, etc., permettent d'éliminer tout de suite l'ideé d'une collection puratente. On pourrait songer à un hématome, mais il n'existe point de traumatisme initial. La petite collection limitée du début était donc sans donte un anévrysme de la radiale qui sons l'influence de malaxations violentes et intempestives s'est brusquement transformé en anévrysme diffus.

Quelle étaite, en pareil cas, la conduite à observer? La meilleure méthode et la plus certaine était évidemment d'aller à la recherche des deux bouts de l'artère brisée et d'en opérer la ligature après avoir débarrassé la poche de son conteuu. Mais étant dounés la vieillesse des accidents, le volume et la distension de la tumeur, la présence d'une ulcération cutaine étendue, les désordres intérieurs devaient être déjà considérables. Aussi pareille intervention nous apparutelle comme irréalisable et en désespoir de cause, nous proposâmes au malade l'amputation du bras. Mais ici on se heurtait aux convictions bien arrêtées du patient qui, comme tous les Chinois ses compatriotes, tenait absolument à se présenter au complet le jour de sa mort devant l'esprit ancestral et qui opposa à uotre proposition le refus le plus formel.

Il fallait agir cependant ; le temps pressait, une breche cutanée était imminente et avec elle l'hémorrhagie foudroyante et mortelle. Nous songeâmes alors à instituer un traitement purement paillatif : la ligature de l'humérale au pli du coude qui fut acceptée.

L'artére fut donc découverte et liée le plus bas possible en respectant une grosse collatérale qui se présenta sous le bistouri (20 Novembre). Les suites opératoires furent excellentes. Le malade accusa simplement un peu d'engourdissement de l'avant-bras. La tumeur parut s'affaisser ; sa consistance devint mollasse et on pouvait même lui imprimer des mouvements d'oscillation ce que ne permettait point autrefois sa distension. Mais à cela se borna l'amelioration ; l'ulcération cutanée gagnait toujours et la meuace hémorrhagique se posait de nouveau dans un delai plus ou moins êloigné.

Dans ces conditions nous nous résolumes enfin à offrir au malade de tenter une intervention directe sur la poche sous condition formelle de nous autoriser à amputer, en cas d'insuccés. Après une lutte acharnée, le patient se rendit à nos objurgations.

L'opération fut pratiquée le 11 Décembre après anesthésie cocainée et application de la bande d'Esmarch : Grande incision de 12 centim., suivant la ligne d'opération pour la ligature de la radiale, allant jusqu'a l'apouêvrose. La peau se detache facilement de cette derniére sous la simple pression des doigts. Pour nous donner plus de jour, nous détachous par une deuxieme incision courbe contournant l'ulcération un grand lambeau cutanê. L'apouévrose est à son tour sectionnée sur une soude cannelée et la poche anévrysmale se montre aussitôt sous nos yeux. Nous y plongeons le doigt qui s'y enfonce comme dans de la gelée de groseille et ramène des caillots ocreux et de débris musculaires. Par expression et au moyen de lavages nous la vidons de toute cette purée musculaire et sanguine. Notre doigt allant en exploration retire de

nombreux débris osseux. Le radius est fracturé sur une longueur de douze centim. environ ; nous en extrayons des séquestres sur lesquels on remarque encore l'expansion fibreuse des insertions musculaires. Les muscles de la région externe (radiaux-supinateur), et les muscles superficiels de la région antérieur (rond pronateurgrand palmain—petit palmain) n'existent plus et nous essayons sans succés de reconnaitre au milieu de ce putrilage le médian et l'artére radiale.

Il était évidemment impossible de conserver un membre atteint de pareils dégâts et nous avertîmes le malade qu'il devait se résigner à l'amputation du bras. Celle-ci fut pratiquée, séance tenante, au tiers inférieur, pour la méthode circulaire, aprés *anesthésie cocainée*. Elle fut supportée sans graude douleur et une dizaine de jours aprés, le malade pouvait de nouveau vaguér à ses operations habituelles aprés avoir présente des suites opératoires trés benignes et apyrétiques.

Suivant le désir de l'opéré le segmeut du membre amputé, lui fut remis et un sien ami l'enterru soigneusement dans une minuscule fosse d'où il sera exhumé plus tard lorsque le réclamera le squelette possesseur, navré de sa mutilation anticipée.

RAPPORT SUR LA SITUATION SANITAIRE DE PAKHOI POUR LA PÉRIODE S'ÉCOULANT DU 1ER MARS AU 30 SEPTEMBRE 1907.

Par le Dr. R. Ascornet.

Arrivé pour la première fois à Pakhoi le 22 Février et agréé comme Médicin des Douanes impériales Chinoises à dater du 1er Mars, je n'aurai que fort peu de choses a dire sur l'état de la santé publique à Pakhoi pendant les 7 mois qui vienneut de s'écouler.

Mes prédécesseurs ayant très certainement traité la question climatologique et nosologique de ce pays, il me restera simplement à dire quelques mots des deux épidémies, choléra et peste, qui ont sévi cette année à Pakhoi et dans les environs immédiats.

Les pluies ayant en partie manqué cette année on pouvait s'attendre â une reviviscence des anciens germes morbides, cholériques, pesteux, dysentériques, au moment des fortes chaleurs. C'est du reste ce qui n'a pas manqué. Les forte pluies, pui parait-il les années précédentes, se chargeaient de nettoyer la ville et d'entraîner à la mer les détritus innomables qui souillent les ruelles et les carrefours, ont complêtement fait défaut, aussi le choléra faisait-il son apparition à Lien-cheou dans

la deuxième quinzaine de Mai. Cette épidémie, qui semble-t-il a été assez meurtrière, n'a pris fin que vers le 15 Septembre.

Dans les premiers jours de Juin on constate des cas de choléra à Ngai-sa, village situé dans la banlieue de Pakhoi. Ce village est habité par une population que l'on peut estimer à environ 1500 habitants; au debut l'épidémie a sévi avec intensité, 6 décès en moyenne par jour, pour aller ensuite décroissant.

Enfin vers la fin Juin on note des cas de choléra à Pakhoi même. On compte 6 décès par jour en moyenne pour le choléra, dans une population estimée à environ 30,000 habitants. Cette émpidémie diminue dans la deuxième quinzaine de Juillet, où il n'y a plus que 4 a 5 décês par jour. Chose bizarre cette diminution de gravité de l'épidémie coincide avec une recrudescence d'affections gastro-intestinales, diarrhées et dysentérie qui sévissaient déjà depuis trois mois environ. Les cas de choléra étaient trés sévéres, puisque les malades atteints mouraient en 4 et 5 heures. Les enfants ont été indemnes, l'épidémie se localisant chez les grandes personnes et plus particuliérement chez les femmes. Certains hommes atteints ont guéri spontanément, et on ne cite pas de cas de femme atteinte ayant échappé à la mort.

L'épidémie à sévi surtout chez les gens de vie sédentaire, boutiquiers et artisans; la classe si nombreuse des coolies ou des travailleurs au grand air a été peu atteinte. En toût le choléra dure toujours, c'est surtout la population des jonques qui est décimée. L'épidémie s'étend, la plupart des villages voisins de Pakhoi sont contaminés, évidemment par les allées et venues continuelles des gens apportant leurs denrées au marché, mais on y constaté surtout des cas isolés. Les villages de Ti-cok et de Senong-tune surtout ont été cruellement éprouvés. A Ti-cok il y avait plus de 10 cas mortels par jour. Enfin à partir du 10 Aout l'épidémie été en pleine décroissance, et s'est terminée vers le 15 du même mois, ayant été trés violente, mais en somme de peu de durée. En Septembre on cite encore à Pakhoi de loin en loin quelques cas isolés mais non mortels.

Vers le 20 Aout le choléra se montre au village de Kao-tak; comme pour Ti-cok l'epidémie sévit trés durement (une dizaine de morts par jour dit-on) mais dure peu. Ce village, port de jonques trés populeux, situé a 6 Km. environ de Pakhoi, qui compte 1500 habitants, à été doublement éprouvé. Dans les premiers jours d'Août la peste bubonique y avait fait son apparition, et dès l'origine sévissait avec intensite. Il est très difficile d'avoir des renseignements exacts sur cette epidémie car la population très effrayés par la grosse mortalité, ne veut pas en parler, craignant dans sa superstition, que la seule

Tableau Statistique de Météorologie pour 1907.

Pakhoï. Service de Douanes impériales.

	Moyenne Mensuelle des Minimas.	Moyenne Mensuelle des Maximas.	Moyenne Mensuelle de la température.	Moyenne hygromitrique mensuelle.	Pluie totale du mois.	Quantité de pluie tombée le matin.	Quantité de pluie tombée le soir.	Température Maximum du mois.	Température Minimum du mois.	Obervations diverses.
					mm	mm	mm			
Janvier	13°.05	21°.12	17°.8	69°.5	33.4	28.3	5.1	26°.8	6°.4	
Février	11°.30	15°.96	13°.63	85	32.9	31.2	1.7	25°.7	7°	
Mars	15°.43	21°.57	18°.50	78.90	17.6	12.4	5.2	30°.2	7°.9	
Avril	19°.5	25°.02	22°.26	82	166.5	137.1	29.4	31°.3	11°.4	Les températures sont données en degrés centigrades; la Hauteur d'eau en millimètres; la Moyenne hygromitrique est ainsi évoluir. 100 représentant la saturation.
Mai	24°.65	29°.02	26°.9	73.9	113.2	76.8	36.4	32°.3	20°.8	
Juin	25°.24	31°.17	28°.23	75	203.2	153.1	50.1	33°.4	21°	
Juillet	26°.6	31°.8	28°.9	76	287.6	255.2	32.5	34°	23°.3	
Août	25°.2	31°.5	28°.34	78.5	280.4	242.9	37.5	34°.2	23°.6	
Septembre ...	24°.8	31°.1	27°.97	78.35	447.2	398.6	48.6	33°.4	22°.8	
Octobre... ...										
Novembre ...										
Décembre ...										

énonciation du nom de la maladie, ne la lui donne. Cette épidémie de peste a pris fin vers le 1er Septembre. La peste n'a pas été constatè à Pakhoi même, non plus que dans les autres villages voisins, elle semble s'être cantonnés dans Ti-cok. Il est étonnant que vu le mouvement continuel et trés important d'échange qui se fait entre cette ville et Pakhoi, cette derniére soit restée complêtement indemne. Aucun cas de choléra n'a été constaté chez les Européens ou dans leur personnel. Bien avant l'apparition du choléra, au commencement de Mai j'avais noté une recrudescence très notable de diarrhée et de dysentérie; actuellement encore, ces deux affections qui avaient presque disparu au moment de lépidémie de choléra, reprennent avec une grosse intensité, mais on ne signale pas de morts dus à cas affections.

Je n'ai pas entendu dire qu'une épizootie quelconque ait sévi soit sur les bestiaux soit sur les animaux domestiques.

Je join à ce rapport un tableau statistique de Météorologie dont les indications m'ont été gracieusement fournies par le Révérend Père Pénicaud, chargé de l'observatoire Français à Pakhoi.

HEALTH REPORT OF HOIHOW FOR YEAR ENDING OCTOBER 31st, 1904.*

By H. M. McCandliss, M.D.

Several of the foreign children have had measles, and amongst those who have been living at the Hoihow Light Station there has been some malarial fever. There have been several cases of whooping cough. In other respects the general health of the foreign community has been good. Facilities for out of door sports have contributed much toward the general well-being of the staff.

In the native community there have been none of the terrible epidemics of years past, and whereas during the plague years the populatiou had to be recruited from the country and adjacent sea port towns, it has well held its own for the past two years. The French dispensary has continued its ministrations in Hoihow and in Kiung-chow, both uuder Dr. Feray, and the American Presbyterian Hospital in Hoihow has been continued under Dr. McCandliss.

Of mycetoma or fungus foot there have beeu four cases; all women, and in each patient the disease has been confined to a single

*For the explanation of the publication of this and other few old reports, see Editorial in the issue of November, 1907.

foot, and not extending into the leg bones. If it were not for the intense prejudice against the deformity, amputation would be the proper and radical treatment. In one woman of sixty-two, in whom locomotion is not now so important a factor as in the days of her working life, all the soft bones of the foot and part of the os calcis were removed with chisel and scoop. Repair has been very tedious, partly owing to the frequent strong antiseptic solutions forced through the drainage tubes to obviate a recrudescence of the disease. A much younger woman's foot was dealt with after the same manner, but not so extensively and a second operation will be necessary. The third and fourth cases have been treated by a sharp irrigating spoon following the sinuses and subsequent daily irrigation. Owing to the general structure of the foot bones there is always an admirable chance for some of the fungus to remain in some unexplored crevice and propagate. In the above four cases tonic treatment has been pushed to the limit.

The region to the east of Hoihow seems to be rich in vesical calculi, and it looks as if a large harvest is to be reaped in the future. During the year, and according to the nature of the case, we have done litholapaxy and the lateral and suprapubic operations. It may be well to mention that we have had no deaths from any surgical operations during the last three years. In two cases where the crushing operation was used it was considered wise to extend the procedure over two or three sittings at intervals of ten days.

We have had fewer cataracts and more of those desperate cases of entropion, where all four lids have to be operated on. If the condition has been of many years' standing, the cornea may be full of scar tissue from long continued irritative keratitis, or the cornea may be covered with opaque fibrous membrane. In other cases, however, the filminess of the cornea rapidly subsides and the patient is delighted with his restored vision. Frequently granular lids are associated and require several rubbings with bluestone.

There has been the usual crop of enlarged spleens; thirty-three of the in-patients having spleens that either reached to the median line or else passed beyond it. During the first week the patient has fifteen grains of *quinine* daily, after which the routine treatment of *quinine, iron,* and *arsenic* is pursued. Although it is the custom to either paint weak *tincture of iodine* over the spleen, or else to rub in some of the red *iodide ointment*, we do not expect it to do much more than satisfy the patient that he is having something done for the outside also. We would like to push the *arsenic* treatment more, but the natives here bear *arsenic* badly and even the small doses have to be watched, lest

blood and mucus appear in the stools. Once or twice a week the maximum dose of *quinine* is again given. These patients are apt to remain with us about two months and then take some medicine home with them to complete the cure. While the very chronic cases are not expected to decrease much in size, the comparatively recent cases do so. Whereas the conjunctiva, face and hands have been yellow and muddy, the urine reddish, the blood pale and watery, and the whole system weak and debilitated, we soon find all these conditions changed, and the languid, sick expression is lost, and the patient assumes an appearance of well being. Four of these spleen cases came to the hospital not because of the enlarged spleens, but because of the serious nose bleed with which they so frequently suffered. We are very careful not to perform any operation involving the loss of blood, even if it be but the extraction of a tooth, if we know that the spleen is enlarged, as several experiences in the past have taught us the possibilities of uncontrollable hemorrhage. We have not only to separate these enlarged spleens from other cases, but as an additional precaution, several attendants go around every night with butterfly nets and catch such mosquitoes as are to be found in the wards. In order to facilitate the finding of the mosquitoes the walls must be kept whitewashed. We would be glad to screen our malarial patients with mosquito nets, but we cannot prevail upon them to tuck the curtain in properly, so that not only does the net not protect from mosquitoes biting them and afterwards biting others, but the net, owing to ineradicable Chinese habits, soon becomes a very dirty ornament.

One of the spleen cases is that of a woman, not yet thirty, with an ovarian cyst. The enlarged spleen rules out a radical operation. The cyst was tapped and a little over one hundred pounds of fluid was removed at the one sitting. This is the largest tumor we have seen in the island. Of course the tapping is merely palliative and will have to be repeated. In the meantime we are trying to reduce the size of the spleen. The treatment has to be suspended from time to time on account of a recurring nausea which seems to be a concomitant of the ovarian disease.

Although the natives of this part of China have frequent feast days in which they gorge themselves with food, there are many of them who when taken month by month, are very much underfed. There are others who on account of some taint as of syphilis, or of tuberculosis, or of the depression and blood cell destruction of malaria, do not assimilate enough fat to keep them in good physical condition. During the year there have been about thirty cases of women and children with

enlargement of the glands of the neck and arm pits and enlargement of the joints. In these conditions a certain amount of *cod liver oil* is readily taken, but not being satisfied with what internal administration might do, we have daily used up nearly an ounce of ordinary olive oil by rubbing it into the arm pits, flanks, and groin, and the improvement has been so conspicuous that this external treatment has been extended to all of those whose systems are markedly below par.

This matter of giving of oil rubs certainly takes time, but it is a duty which can be performed by the less intelligent of the attendants, and the patients have come to look upon it as being a very important part of the treatment. The bad spleen cases are very much improved by the oil rubs. Several old women who were being treated for other affections, but who also had chronic bronchitis associated, have been charmed with the effect of rubbing with olive oil saturated with camphor. Four of the half grown girls in the boarding-school, all of whom had coughs and two of whom had tubercle bacilli in the sputum, were ordered to be thoroughly rubbed with oil every night, and the improvement was rapid and satisfactory; two of them no longer requiring treatment, and the two with tubercle have now good chest expansion, and swing on the ropes of the merry-go-round with zest.

There is even a stronger teudency with sick Chinese to treat themselves as invalids than there is with Europeans, and they are too willing to lie on their beds in the ward. For this reason swings have been put up in the yard, and, together with a half dozen pairs of stilts and a giant stride pole, they have played a part in weaning them from their indolence. Those who really cannot walk without helps are provided with crutches and encouraged to use them.

The China Medical Journal.

VOL. XXII. JANUARY, 1908. NO. 1.

Editorial.

Not the foundation stones of the new hospital in Hwaiyuen, but the bladder stones removed in the last two years by its chief-surgeon and lithotomist, Dr. Samuel Cochran.

THE IMPERFECTIONS OF THE CONSTITUTION.

"Tory in an Inland City" hits the mark when he calls attention to the fact that the Constitution was revised too hastily at the last Conference. Not six months had passed before the Executive began to appreciate this fact, and we are inclined to think that it would have been better to have left the thing alone, with the minor imperfections that existed, than to have hurriedly corrected these and at the same time introduced certain others which will probably embarrass us considerably before we are able to have them resubmitted to the Association.

Several of the points made by "Tory," or Tartar, as we should have thought more appropriate, are well taken. The wording is faulty, and in a number of places not only shows the results

of too much haste, but even opens the constitution to various possible constructions. What should be extremely simple and unmistakable is quite the reverse.

We still hold, however, that the triennial meeting is the best possible court of final appeal. This does not mean that it is satisfactory by any means, but the question has often been up for discussion and was thoroughly hashed out at the last conference and the general sentiment of those present was so expressed. A referendum through the mails or through the JOURNAL has the fatal defect that it is never answered by even a good number of the total membership. There are more votes cast by far at a conference than by any referendum within our memory, with the exception of the recent medical school question, and in that case it was so evidently a matter of self-interest that it does not apply as an argument for the larger number of cases where the inducement is not so personal. The old method of election, for instance, brought usually no responses whatever, never more than two or three.

The worst muddle in the constitution as at present is on the subject of membership. Article IV., Sec. b., should apply to honorary membership only, and the large number of medical practitioners in the East should certainly be eligible to corresponding membership without the delay of waiting for a triennial conference. It is discourteous and absurdly short-sighted to provide otherwise than for their prompt election to corresponding membership in the only medical society in these parts. We consider that this is so dangerous a position and so unwise a stand that it is probably worth the Association's holding a special general meeting for the express purpose of placing ourselves right in the matter.

And while we are about it, we might as well do whatever else in the way of alteration to the constitution seems advisable, and we respectfully suggest to the president of the Association that he appoint a small committee to reconsider the constitution with care and to present to us at the next general meeting, whenever that shall occur, a thoroughly correct and well digested copy, closely along the lines of the old in all essential respects, but consistent and practical. And who so good a chairman for this committee as the man who has shown such analytical interest in the same, the "Tory in an Inland City?"

THE PATHOGENESIS OF TYPHOID FEVER.

"The typhoid bacillus does not develop in the intestinal contents except under unusual conditions." Such an unqualified statement, coming from the Massachussetts General Hospital, makes one stop and question whether it is not high time to revise one's early notions of the pathogenesis of typhoid fever. It makes one hope that the term which has been given in the advance sheets of the medical vocabularies of the C. M. M. A. (腸熱病) may not be the finally accepted term to remain on record in the dictionary soon to be published. The view of Coleman and Buxton as to the nature of typhoid fever was given to the public in an address on March 7th, 1907, and appeared in print in the *American Journal of the Medical Sciences* for June, 1907. Comment on this view appears elsewhere, but for the sake of comparison it may be well to restate the essential features in the conclusions of these two workers. They believe, as a result of a study of 1,602 cases, that "the bacillemia in typhoid fever does not constitute a true septicemia, but it represents an overflow of bacilli from the lymphopoietic organs." And further, that "the clinical picture of typhoid fever results only from infection of the lymphopoietic organs by the typhoid bacillus, with invasion of the blood stream and destruction there of vast numbers of bacilli." It is hardly necessary to add that these workers believe that the typhoid bacillus is present in every case of typhoid fever throughout its course.

The question of pathogenesis is taken up from another viewpoint in the more recent paper of Drs. Pratt, Peabody and Long, read in June, 1907, and printed in the *Journal of the American Medical Association* for September 7th, 1907. Contrary to the results obtained by many earlier observers, it appears that in a large percentage of cases it may be impossible to find the typhoid bacilli in the intestinal contents of patients known to be suffering from typhoid fever, even after repeated examinations. It seems as if some of the earlier observers must have failed to distinguish sufficiently accurately between B. coli and B. typhosus. At all events the very careful investigations of these observers in Boston show that B. typhosus was isolated in the stools of but 17 out of 100 cases, i.e., in 17 per cent. In view of the recent observ-

ations that typhoid bacilli may be carried for months and years in the intestines of certain persons, now known as "bacilli-carriers," it is reassuring to find that in all probability not a very large proportion of patients excrete any typhoid bacilli from their intestinal canal. Turning first to the conclusions of Pratt, Peabody and Long, we read: "Typhoid fever is a general infection. The typhoid bacillus is an invasive organism. It is able to develop in the blood and the tissue juices of the body. It does not develop in the intestinal contents except under unusual conditions. It more frequently occurs in large numbers in the urine than in the feces. The gall bladder is a favorite habitat of the typhoid bacillus, and it develops luxuriantly in the bile. The typhoid bacilli in the intestine come in large part from the bile. They are rapidly destroyed in the duodenum and jejunum, and it has been recently shown that the wall of this portion of the intestine has marked bactericidal power. It is probably that the destruction of all the typhoid bacilli that enter with the bile rarely occurs within the lumen of the bowels. The number, however, becomes so greatly diminished that their presence cannot be demonstrated in the stools of many patients with typhoid fever. . . . (With the most favorable methods bacilli were recovered from only 21 per cent. of febrile cases and were usually found in but small numbers.) It is not improbable that if there was a method that permitted the bacteriological examination of the entire stool for typhoid bacilli as has been devised for the detection of cholera bacilli, a few microorganisms might be found in every stool. This does not, however, affect our conclusion that the typhoid bacillus does not find conditions favorable for its growth in the intestinal contents. It is demonstrated in such a considerable proportion of cases because it is eliminated in great numbers by the bile. . . . It may be found in the urine and sputum when absent from the stools. The portal of entry of the typhoid bacillus is not known. There is no more evidence in favor of entrance through the intestine than through the tonsils or the gastric mucosa."

A little thought will show that the conclusions cited from the work of the two sets of observers are not in conflict. Both agree that typhoid fever is essentially a septicemia. Coleman and Buxton carry somewhat further the study of this condition of the blood.

They find that the lymphopoietic organs are the natural place of the growth of the bacillus, and on the other hand, the other workers have shown that the gall bladder is a favorite abode for it. It would seem that in the lymphopoietic organs there was definite multiplication, and probably from these occurs the transmission into the blood. The bile probably becomes infected from the blood and is itself the great source of infection for the intestinal canal. Baumgarten stated years ago that the typhoid ulcers in the intestines ought to be regarded as metastases rather than as primary lesions. His view has been revived by Schottmuller. It is difficult to explain the absence of intestinal changes in cases of so-called primary cholecystitis due to the typhoid bacillus if the intestinal lesions were due to the action of typhoid bacilli in the intestine. In these cases of typhoid cholecystitis, in spite of the enormous discharge of bacilli into the intestine with the bile, there are no intestinal manifestations. Not only so, but in one fatal case there were no typhoid ulcers in the intestine, although bile containing typhoid bacilli entered the duodenum freely.

It has been shown, not only that there are cases of typhoid fever without intestinal lesions, but that there are cases of typhoid ulceration of the intestine without disturbance of the health ; in other words, without typhoid fever.

It is undoubtedly true that bacilli are not thrown off in large number from the ulcers as was formerly taught. If this were so, we should expect to find a larger number of bacilli low down than high up in the bowel. Exactly the opposite condition actually exists. In fact, not only are bacilli not thrown off commonly from the ulcers, but von Drigalski has been unable to cultivate bacilli from the surface of ulcers when they were recovered from the adjacent mucous membrane.

The practical conclusions for the general practitioner are obvious : 1. While the urine and feces in a case of typhoid fever are to be most carefully disinfected, every part of the patient must be regarded as capable of transmitting infection. 2. As far as practicable bacteriological examinations should be made of the stools of all cases that have recently had typhoid fever, at least three times during a period of several months, in order to determine that the convalescent patient does not continue to be a menace to the health

of the community. 3. If he is found to continue to excrete typhoid bacilli for any continued period of time, the desirability of opening up the gall bladder with a view to ensuring free flow of its contents, and removal of any adventitious material, should be seriously considered.

E. H. H.

NOTES.

On page 295 of our last issue (November 1st, 1907) *cuolin* should read *creolin* and *cunosol* should read *crenosol*. Our apologies to Dr. Hart for the errors.

We would say for the benefit of those interested in work among the Chinese insane and especially of those contemplating the foundation of refuges or hospitals for the same, that an interesting series of three papers on the general subject is now in preparation by Dr. C. C. Selden, of Canton, and will begin in our next issue.

PUBLICATION COMMITTEE.

The issue of the second volume of Dr. Fulton's translation of Penrose's Gynecology has been unexpectedly delayed, as the amount of matter proved larger than was anticipated. It should now be ready for distribution. Dr. Fulton tells me that copies of Dr. Penrose's Gynecology (in English) can be obtained from the China Baptist Publication Society, Canton.

Dr. Venable's Bacteriology should be ready by March. Those who propose teaching it should obtain the original from the U. S. A.; the title is "Microscopy and Bacteriology, by P. E. Archinard, M.D. The Medical Epitome Series, Lea Brothers & Co., Philadelphia." Or it can be ordered through the mission presses or Mr. Ed. Evans.

Let me again urge all teachers to obtain from home the original works. They will find that it will greatly simplify teaching. This is especially true of a subject like physiology.

Time and again one hears incidentally of some who write to the press for a book and cannot obtain it. A list of the *new* books is given on the advertisement page (inside of cover). The old books can be found in the Presbyterian Press catalogue and Dr. Whitney's translation of Gray's Anatomy is advertised separately. In the event of any failure to obain the work desired please write to me (Dr. Cousland, 2 Shantung Road, Shanghai).

ASSOCIATION NOTES.

New Members of the C. M. M. A.

Joined through the China Medical Journal.

Nina H. Beath, M.B., Ch.B., Ed., ... E. P. M., Swatow.
J. E. Mitchell, M.A., M.D., C.M., McGill, L. M. S., Canton.
J. W. Jackson, M.B., C.M., ... Shanghai.

Joined through the Korean Branch, November, 1907.

H. C. Whiting, M.D., Am. Presb., Chai-ryeng.

With this number is sent out the medical statistics blank for 1907. As there is no need to ask every year for detailed information of the financial methods, that part has been omitted. Let no one hesitate to send in his or her figures either for fear that they underestimate the work or that it is too small to be worth representing. We all know that circumstances differ, and that figures can give but an imperfect picture of what is being done. Yet what they do tell us is of such great interest and value that it is important for every one to fill in the sheet and return it as soon as possible.

Attention is also drawn to the sheet issued with the November Journal. Will those who have not yet returned it please do so now? The information asked for is required in connection with various aspects of the Association's operations. Some very interesting educational details have already come to hand, and it is hoped that when all are collated and published the information will be of real value.

The recent formation of the Shanghai Medical Missionary Society adds a fifth branch to the C. M. M. A. Medical missionaries within convenient travelling distance of Shanghai are eligible for membership, and those passing through Shanghai are cordially welcomed to the meetings. These are held on the third Wednesday of each month, from October to June. Dr. Tucker, of St. Luke's Hospital, is secretary.

Will members who are going on furlough please note that the Journal will be sent to their home address free of extra charge? Some leave without notifying us. Others ask that it be not sent to them until further notice and while absent pay no membership dues. On return they may or may not renew their membership.

A card to the Presbyterian Press and one to the secretary giving the home address and date of leaving China is all that is required. The secretary is very anxious to be in touch with the movements of all the members and begs that they will give him notice of going on or return from furlough or change of station. The editor and he will be glad of a call while in Shanghai.

Hearty congratulations to Drs. McAll and Somerville on their convalescence from severe attacks of paratyphoid. By a curious coincidence both were ill at the same time, one at home and one in Wuchang. We regret to hear that it is considered necessary for Dr. Somerville to go home on sick leave. May our brethren have a speedy and thorough restoration to health.

Dr. Phillips reports nineteen members in the Manchurian branch. Excellent! The Association will not be properly organised until the great bulk of its membership is grouped in branch societies, each provided with an alert secretary. Will those members in districts where the formation of a branch is feasible do their best to stir each other up to an interest in the subject and proceed to organize one as soon as possible?

And may I again appeal for the enrollment of all outsiders? Every autumn sees the arrival of new medical missionaries, and there are still a number of older ones who have never joined or who have dropped out. It is difficult for those in Shanghai to learn of the new arrivals. It is "up to" the membership to tell them of the C. M. M. A. and the JOURNAL and invite them to join. A proposal blank is sent out with this number of the JOURNAL.

Dr. A. K. Baxter, of the English Methodist Mission, Yung-p'ingfu, writes to a home paper:—

"We have just returned from a six weeks' stay at the Union Medical College, Peking. I took a class of thirty-one students through a course of practical pharmacy. My notes were printed by a duplicator as we went along, and copies given each student. Both the B. P. and the U. S. P. were used, as some of the students come from American missions. Prescription writing formed part of the course. At first the students wished to write the whole in Chinese character, but I insisted on the body of the prescription being written in Latin. It was difficult to get them to understand about the cases and declensions, as only one had some understanding of Latin. We placed more stress on the metric

system than on the English weights and measures, as the former will probably become official in China, and is also on the decimal pattern, like their own domestic weights and measures. The college itself is well arranged for teaching purposes. It cannot but be the chief centre for medical education in North China. The government is arranging to start a medical school of its own, but it cannot provide such facilities for teaching students in their own language. They wish their students to understand and listen to lectures in English. One all-important feature in the Union Medical College is its Christian atmosphere. Many of the students come from mission hospitals, and during their course still keep an active interest in mission work."

There are doubtless many of those going on furlough this spring who wish to take a course in tropical medicine. Their attention is drawn to the notice in our advertisement columns of the London School of Tropical Medicine.

I shall be glad to furnish the dates of the post graduate courses at the various teaching centres in Great Britain to any who may apply.

It will be good news to many that the new edition of Sir Patrick Manson's Tropical Diseases is now out.

P. B. C.

SUBSCRIPTIONS TO THE PUBLICATION COMMITTEE FUND.

Dr. Fowler	$21.70	Dr. E. J. Peill	$5.00
,, Polk (Women's Hospital, Soochow)	20.00	,, Lowry (Methodist Mission Hospital) ...	20.00
,, Ingram	20.58	,, Paterson	20.00
,, Tatchell	5.00	,, Hume (additional) ...	10.00
,, Starmer	10.00	,, McCracken	5.00
,, S. G. Peill	5.00	,, Edith Bryson	20.00
Roberts Memorial Hospital...	10.00	,, Muir Sandeman... ...	10.00
Dr. Graham	10.00	,, McMurtry	5.00
,, Palmborg (S. D. B. Med. Fund)	10.00	,, Cox	13.30
,, Goddard	5.00	Drs. Starmer and Miller (Women's Hospital, Mukden)	30.00
,, Shire (Women's Hospital, Foochow)	20.00	Shantung Road Hospital, Shanghai, per Dr. Davenport	25.00
,, Wittenberg	5.00		
,, Service	5.00		
,, Stuckey	10.00		$340.58
Hsiaochang Hospital ...	20.00		

The committee returns very hearty thanks to those who have subscribed to its funds and draws the attention of those whose interest has not yet materialised to so good an example. *So far*

not a single subscription has been received from the Chinese. It is perfectly certain that if this translation work were brought to their notice in an adequate way many would be willing to help. Some may even desire to finance a whole book. This will cost anywhere from $500 to $2,000 according to the book chosen. A member of the C. M. M. A. on going home on furlough recently asked for a list of the books to be published, with the cost of each, in the hope that he can find friends to undertake singly or conjointly the expenses of translating and printing one or more.

Book Review.

Health Hints for Missionaries to China. (Published by the Medical Missionary Association of China. Presbyterian Mission Press, Shanghai. Price 20 cents each.)

This booklet, compiled by order of the Association and authorized by the last Conference, is the work of Drs. Boone, Cousland and Davenport, and is thoroughly well adapted to supply the need it was designed to meet. It is carefully done, and is neither too large not to be of easy reference and quickly absorbed, nor too small to cover the important points of the matter.

It is designed primarily for the use of mission boards, that they may understand the health question intelligently, and to be by them put in the hands of all accepted candidates for mission work in China. It will also prove a useful hand-book to put in the hands of lay missionaries on the field and of anyone contemplating a long or short stay in China and the East. The divisions are:—

The home side, including the choice of candidates.
The climate of China.
The outfit needed.
The voyage out.
The foreign side.
Medical notes.

We had the privilege of seeing the manuscript and of going for it before publication and could not even satisfy our vanity to the extent of serious criticism at that time. It would be obviously unworthy to do so at this late date, and we are happy to confess that we still think it excellent.

Z.

Medical and Surgical Progress.

Pathological Notes

Conducted by JAMES L. MAXWELL, M.D.

Beri-beri.

The Cause and Prevention of Beriberi is the title of a book by Dr. Braddon, State Surgeon, Negri Sembilan, Federated Malay States. In it he deals with the vexed question of the œtiology of this interesting disease. His conclusions are that beri-beri is due to the consumption of stale decorticated (white) rice (uncured rice), which at times contains a poison, whereas white rice made from padi, which has been boiled in the husk and then dried before stripping off the envelopes (cured rice), is always innocuous at whatever period after cleaning it may be eaten, whether, in fact, it be stale or not. The author has collected an enormous mass of detail to support his contention, and the book, big as it is, is well worth reading. The rice theory has many opponents, but after perusing all the evidence one is inclined to come to the conclusion that rice does play a part in the production of the disease, or, at least, that further experiments should be carried out to prove or disprove its action as a cause. All that is required is to use "cured rice" only in all or part of the government institutions—goals, asylums, etc.—for a period of a year or more and to note carefully the results. If beri-beri disappears then the sceptical must admit the truth of Braddon's views.—*British Medical Journal*, 21st September, 1907.

Histology of Tuberculous Sputum.

E. Löwenstein deals with the significance of the presence of tubercle bacilli within the leucocytes in tuberculous sputum and gives in tabulated form details of fifty-six cases in which this phenomenon has been observed. The following are his results: (1) Tubercle bacilli are found within leucocytes with from one to three nuclei in about 10 per cent. of cases of manifest tuberculosis of the lungs. (2) This intracellular disposition of the bacilli occurs (*a*) in well-marked chronic forms of the disease and (*b*) also in recent cases with a tendency to recovery. (3) The intracellular disposition of the bacilli very frequently points to a rapid disappearance of the bacilli from the sputum. The author also describes a case of rapid tuberculosis of the genital organs followed by tuberculosis of the bladder in which the intracellular position of the bacilli was first observed after tuberculin injections had been employed.—*British Medical Journal*, February, 1907.

The Acetonæmic Conditions of Children.

From the clinician's standpoint patients in whose urine diacetic acid and acetone may be detected by ordinary methods of examination may be classed into three groups:—

1. Those who usually show no symptoms of acidosis. Included among these are cases of excessive fat ingestion, starvation, high fevers, gastric ulcer, malignant disease, and many others, perhaps all due to deprivation of carbohydrates.

2. Those who while the subjects of other morbid states have also symptoms of acid poisoning which may, to a certain extent, be marked by those of the primary condition. Such are persons

suffering from diabetes, a certain type of pneumonia, intracranial disease, toxic forms of gastro-intestinal disturbance, epidemic diarrhœa, sepsis, intestinal obstruction, acute peritonitis and certain poisons, including *morphine, phloridyin,* and *salicylate of sodium.*

3. Patients who suffer from uncomplicated acidosis which *per se* may terminate fatally. These are the subjects of (a) delayed anæsthetic poisoning, (b) recurrent, cyclical, or periodic vomiting—conditions which may be designated by one title, "Cryptogenic acidosis."

The writer after giving several examples of delayed anæsthetic poisoning and showing that the condition of the liver—acute fatty degeneration—was the same as in cases of cyclical vomiting, finally sums up the question as follows:—

1. Acetone and diacetic acid are found in the urine in a number of conditions, and may be, but are not necessarily, associated with symptoms of acidosis.

2. Cyclical vomiting and delayed anæsthetic poisoning are examples of acidosis of unknown origin.

3. Delayed anæsthetic poisoning is due not so much to the kind of anæsthetic used as to the state of anæsthesia.

4. The acetone series is a product of the imperfect oxidation of fats, and hence in these conditions the oxidizing power of the tissues must be inadequate.

5. This is further demonstrated by the condition of the liver.

6. There is evidence in favour of the failure of oxidation being due to too great a supply of fat to the chief seats of oxidation rather than to a primary deficiency in oxidizing power, although the latter alternative cannot be excluded.

7. Probably this may be brought about by a variety of toxins which act like phosphorus.

8. The determining cause of acidosis is the accumulation of the precursors of acetone, either from excessive formation or deficient excretion.

9. Anæsthetics are dangerous to patients who are the subjects of acidosis.—*British Medical Journal,* September 28th, 1907.

Treatment of Sprue (Psilosis): A "method has gained for an irregular practitioner (Peter Sys) in Shanghai some reputation. It consists in the repeated administration of purgatives alternately with or before the exhibition of large quantities—two teaspoonfuls at a time—of some form of carbonate of lime, believed to be powdered cuttlefish bone or powdered crabs' eyes.—" Tropical Diseases, Manson, Fourth edition, p. 481. There is no doubt whatever that the practitioner in question made some remarkable cures in cases of sprue, which had been despaired of by the regular practitioners in charge, and won for himself a certain degree of respect. But the remedy has never proved as efficient in other hands than his own. It is only to be regretted that he did not see fit to sell his complete experience for a sum within the reasonable means of the community or, under the inspiration of great opportunity, taken in exchange for its free gift, the unstinted gratitude of his fellow-men. Peter Sys is no more, and he has left behind him but an imperfect knowledge of the drugs he used in this intractible disease, and the name of a clever but small-minded man. If ever a man had one talent and wrapped it up tight and sealed it and buried it deep in six feet of Yangtsze mud, that man was Peter Sys.

Report of Local Branches.

THE SHANGHAI BRANCH OF THE MEDICAL MISSIONARY ASSOCIATION OF CHINA.

The first meeting, at the invitation of Drs. Boone, Davenport, Jefferys and Cousland, was held at No. 2 Shantung Road, on November 11th, at 4 p.m.

Those present were:—Drs. Boone, Davenport, Reifsnyder, Lalcaca, Parrott, Lincoln, Myers, Jefferys, Garner, Newell, Tucker, Lee, Hamilton and Cousland.

Dr. Boone was called to the chair and Dr. Cousland as secretary of the meeting. It was resolved, that those present form a branch of the C. M. M. A. to be known as the Shanghai Branch of the China Medical Missionary Association, and to include all those within convenient traveling distance of Shanghai.

The following were appointed as the committee on constitution: Drs. Davenport, Reifsnyder, Jefferys and Cousland.

The meeting was adjourned until 4 p.m., December 11th.

The second meeting was held at Dr. Boone's residence at 4 p.m., December 11th.

After reading the minutes, the Committee on the Constitution read its report which, after being discussed and amended, was adopted as follows:—

Rules of the Shanghai Branch of the China Medical Missionary Association.

1. This Society shall be styled "The Shanghai Branch of the China Medical Missionary Association."

2. The object of the Society shall be the cultivation and promotion of medical missionary work in all its aspects and the establishment of a brotherly bond of union between the members.

3. The officers of the Society shall consist of a President, a Vice-President, a Secretary, and a Treasurer, who shall form a council and manage the affairs of the Society. The outgoing Vice-President shall become the President for the ensuing year, and the remaining officers shall be elected by ballot, consecutively, without nomination, at the annual meeting in June.

4. The Society year shall run from October to June.

5. Meetings shall be held on the third Wednesday of each month, to commence at 4 p.m. All meetings shall be opened with prayer.

6. At the meeting in June, in addition to the ordinary business, the officers shall be elected, reports of the Secretary and Treasurer read, and the programme arranged.

7. At least one meeting in every three shall be a clinical meeting.

8. The Secretary shall give the members three days' notice, in writing, of every meeting.

9. The following are the Regulations for the conduct of each meeting:—

(a). The first half hour of each meeting is to be devoted to preliminaries, business, and the showing of cases.

(b). Papers shall not exceed twenty minutes in length, and after speeches shall not exceed ten minutes. Meetings shall not be prolonged beyond 6 p.m.

(c). Order of Business.—Opening devotion, minutes, business arising out of minutes, cases to be shown, paper for the day, discussion, other business.

(d). On all points not specially provided for by the Rules of the Society "Robert's Rules of Order" shall be followed.

10. Constitution of the Society, etc.:—

(a). The Society shall consist of ordinary and associate members. All legally qualified medical missionaries in Shanghai and adjacent cities shall be eligible as ordinary members. Associate members may be elected from amongst any non-missionary medical men in the said district, who may be in sympathy with the objects of this Society.

(b). Ordinary and associate members may be proposed at one meeting and elected at the next. No election shall

take place unless eight members are present, and no person shall be elected who does not obtain three-fourths of the votes given.

(c). The duties of the President, the Vice-President, the Secretary, and the Treasurer shall correspond to those of the officers of the China Medical Missionary Association.

11. The council shall meet at least once a year before the annual meeting in June. The council shall prepare the programme for each session, summon special meetings of the Society and generally form a standing committee to which any special matters may be referred. All vacancies which may occur in the officers of the Society, between one annual meeting and another, shall be filled up by the council.

12. A subscription of one dollar (Mexican) per annum shall be paid by each member.

13. Alterations in these rules may be proposed at any regular meeting and adopted at the next regular meeting by three-fourths of the votes given, eight forming a quorum.

The following were elected officers :—

President, Dr. P. B. COUSLAND.
Vice-President, Dr. W. H. JEFFERYS.
Secretary, Dr. A. W. TUCKER.
Treasurer, Dr. A. M. MYERS.

The meeting was then adjourned.

A. W. TUCKER, *Secretary*.

Correspondence.

To the Editors of

"THE CHINA MEDICAL JOURNAL."

DEAR SIRS :—I hope you will grant me a little space in your next issue for a few remarks anent the new Constitution and By-laws of the Medical Missionary Association of China.

The Constitution and By-Laws.

One feels tempted to point out various minor faults, errors of composition, mal-arrangement of headings, etc., but to dwell at too great length on such petty points would only have the effect of hopelessly prejudicing against oneself those leading members of the Association who were mostly concerned in drawing up the constitution in its present form. With them I have no quarrel, for they are doubtless busy men, and if one is too busy, something has to suffer; the only pity is that what suffered in this case was the style of composition of the constitution.

One cannot refrain from pointing out the curious irregularity in the use of "this" and "the" in reference to the M. M. A., e.g. ,Art. I, THIS Association; Art. II, The objects of THE Association; Art. III, Members of THIS Association; Art. IV, The vote of THE Association, etc.

Then one wonders whether there is really any difference between the "general meeting" which alone has power to alter the constitution and the "regular" meeting that is authorised to alter the "by-laws."

Article III does really seem to be clumsily put. Take the first paragraph, which deals with two distinct things in one sentence : first with the individual members, who are to be graduates of a recognised college, and secondly with the Association, which is divided into three classes of members. Surely the fourth paragraph (III) "Honorary members, who shall be composed of," etc., is not properly constructed; if it is, then there must be something wrong with I and II. Still it is not my purpose to try and exhaust the list of little points with which one might find fault; to my mind there are graver

issues wrapped up in our adoption of the new constitution.

I think the first question to be raised should he, *Is the Triennial Meeting the best possible final Court of Appeal?* In answering this question one must bear in mind that the members of the Association are scattered over a very wide area, thus making it practically impossihle for some members to get to a conference in Shanghai ; further, in many hospitals (especially in the less richly endowed hospitals connected with British missions) there is no competent native who can take charge of the hospital for a fortnight or three weeks—the society cannot afford a good enough salary to keep such a man—so the doctor must either give up the conference or close his hospital. One cannot expect subsequent conferences to he attended by as large a proportion of members as this last one was, and the tendency will be for missionaries on the lower reaches of the Yangtse, and the nearer coast ports, and for those working under wealthy American societies (and, possibly, for those newly out from home, who have not yet got into the work) to attend these triennial meetings in larger numbers than their less favoured hrethren. There is certainly a tendency for "the opposition" to attend these conferences rather poorly, e.g., one member does not feel enthusiastic on the subject of translation of medical books, a subject that is ohviously to bulk very largely at an approaching conference, so he does not go (N. B.—It is very stupid of him not to go, hut still)—the result is that the Association *unanimously* approves of fresh expenditure to assist the translation of books.

So long as the conference confines itself to passing fatuous resolutions on the subject of cigarette smoking, etc., it leaves many of us undisturbed, while, I suppose, all of us are interested in some of the cliuical discussions that take place, but when it comes to revising a constitution and passing resolutions whereby it accepts financial responsibility and endeavours to render all the members—whether present or absent—liable to he drawn upon to the amount of some forty or fifty dollars a year, then, I think, it goes beyond its powers, and an appeal should he made to all the memhers hy means of a referendum, conducted, preferahly through the JOURNAL, to save extra expense.

I have already trespassed unduly upon your space, Mr. Editor, but I would like to raise one more question, and that is connected with *the election of members*.

It is not clear from the second paragraph of (a) in Article IV (referring to the possibility of members objecting to the election of a new member) whether *any* embryo member can he objected to, or only one proposed by two members and having his or her name published in the JOURNAL. Article V, however, seems to make it clear that any little "local branch" cousisting of "three active members" can elect a member so that *no one* can put him out, while if—in that particular place—there are only *two* members the unfortunate candidate has to run the gauntlet of all the members up and down the coast who might, for some ohscure reason, wish to black-ball him. Doubtless this is very largely a matter of opinion, but to my mind three is too small a number of members to to form a branch, and *in any case* I think permission should be obtained (either from the Executive or from the Association in general meeting) hefore a hranch is recognised or its members regarded as members of the China Medical Missionary Association.

There is much remaining that one might criticise, but I have already written at greater length than I bad anticipated.

One more point and I am done... I would like to see the JOURNAL come out every month and discussions carried ou in its pages from month to month.

If my letter reads crudely, and sbows—perhaps as glaringly as the Coustitution—the evil results of hurry and carelessness, then be merciful, but remember that a constitution is intended to remain "a thing of beauty and a joy forever," while this letter merely represents the rambling remarks of a

TORY in an Inland City.

To the Editors of

"THE CHINA MEDICAL JOURNAL."

DEAR SIRS: A student in the Shantung Union College at Weihsien came to me about the 17th of September with what turned out to be a case of bubonic plague. He came here from near Hwaiyuen, Anhwei, and I have thought you would be interested in his case. His name is Swen Hai-i, and I should think he is about 22 years old. Of course in coming here viâ Chinkiang and Shanghai he may have been exposed to the infection, as cases have been reported in the famine region for some months past. His case seemed to be a very light one, perhaps of the "pestis minor" type, and fortunately no other cases have followed here, although over a month has elapsed since he was taken down.

A Sporadic Case of Bubonic Plague.

He complained first of general malaise, constipation, headache, backache, etc., with a temperature running about 102 F. I thought the trouble might be only digestive, or perhaps a beginning typhoid, until some days later he mentioned a small painful lump in his left groin, which had appeared the previous night. I found the femoral lymphatics large and very tender on pressure, but no focus of infection anywhere on the leg. This made me suspicious, and I had the boy isolated as well as possible at once, disiufecting his room and the clothing of all other students who had been with him, with formalin gas.

The swelling in the groin continued to grow, becoming red and finally showing fluctuation about three days afterward. I then opened it and evacuated about an ounce of pus, which contained some red clots and small black fragments of necrotic tissue. A smear taken at tbat time and staiued with methylene blue showed scattered groups of the bacillus pestis, with quite characteristic form and staining. No other bacteria were present in the pus examined. The wound was dressed daily; all discharges being carefully collected aud destroyed, and healing took place in about three weeks. All this time the boy had to be kept in a mat shed in a vacant lot, as lack of funds has prevented us up to this time from having a suitable isolation building. This lack is one we feel very heavily here, with about 300 students of both sexes, gathering twice a year from a wide area to this one compound, and each a possible source of an epidemic. This case seems especially to show the ease with which plague may be spread, at least here in Cbina, and the comparative certainty with which it can be checked if proper measures are taken.

Very sincerely,

CHARLES K. ROYS.

WEIHSIEN, November 11th, 1907.

To the Editor of

"THE CHINA MEDICAL JOURNAL."

DEAR SIR: In a letter lately received from Dr. Cochrane, of Peking, urging the Shantung missions to unite with the Peking scheme, the following statement is made :—

"There is a strong and growing feeling that to establish a medical college in Shantung at the present juncture would be a grave strategical mistake. This feeling exists not only here but in other parts of China, where the subject of medical education has come up for discussion. The Medical Missionary Association of China strongly urges the establishment of schools in a *few* selected centers, and the opinion is that one is sufficient for North China at the present time."

In order that you may hear the Shantung side of the case, and that your sympathies and deservedly large influence may perhaps be enlisted in our behalf, I am sending you a copy of the reply sent to Dr. Cochrane.

If the "strong and growing feeling" referred to above really does exist, we in Shantung would like to know on what grounds it is based. It still seems to us that this proviuce, with one-tenth the population of China, with fully 18,coo Christians, with the funds in hand to begin medical education, and with several veteran medical educators ready to take up the work, is entitled to one of the proposed medical schools, especially as it is the settled conviction of those who know most about Shantung that the Peking school is out of the question for our students.

We wish all success to the Peking school, and we realize that it is very desirable from their standpoint that we give up Dr. James B. Neal to assist in their work, but we believe that our Shantung missions have an equal opportunity and a greater responsibility for the school planned in Tsinanfu than for the school begun in Peking.

Very sincerely yours,

CHARLES K. ROYS.

WEIHSIEN, November 16th, 1907.

WEIHSIEN, China, November 13th, 1907.

DEAR DR. COCHRANE :—

Your letter of October 28th, *re* our mission uniting with the Peking medical school, has been talked over with those who know the most about education in this province. Their conclusions quite agree with the report on the subject of medical education adopted by the West Shantung Mission (A. P.) at its recent annual meeting in Tsinanfu. I cannot do better than quote from that report, as follows :

"It is evident that the population of this province, nearly equal to that of Great Britain, are in great need of a trained body of men of their own race qualified with the best knowledge of modern medicine and surgery which can be given them. It must also be said that there is no agency at present which can at all adequately meet this need; while well-manned and well-equipped medical schools are being started in other parts of the Empire, none of these are near enough, or their fees low enough, for students from this poor and relatively isolated province. The school in Peking, which in time may be accessible by rail from this province, has its fees and expenses far too high for Shantung men. Our colleague, Dr. James B. Neal, who has recently visited that school, considers it quite out of the question for students of this province to attend there. For these reasons we believe that the opening of a medical school (in Tsinanfu) to be provided for on a geuerous scale, and to be capable of further expansion as the work develops, is a wise use of Christian money."

You may wish to know why we believe the Peking school out of the question for our students. The reasons as they have been stated by various authorities on education in this province are substantially as follows :—

1. Our Christian students have not the funds required, and cannot raise them from native sources. The poverty of our people is very hard for outsiders to understand.

2. Our missions cannot subsidize enough students for our own needs without using up in ten years an amount equal to the entire fund now available for a medical school in Tsinanfu. $250 a year would be a conservative estimate of the amount required for each student. We need at

least eight men a year for our mission hospitals, provided all stay with us two years. To get eight men willing or fit to do the work required of them, we should have to send at least sixteen a year, at an expense to the missions of $4,000 annually.

3. Even if morally untainted, we do not believe it wise to send country boys to Peking, because they will never be satisfied with the salaries which can be paid, or the fees which they can earn in this province.

4. The above being true, we cannot abandon medical education for our own province even for the sake of assisting in the splendid work of the Peking school, and we feel justified in beginning with a relatively lower standard, if necessary to bring the training within the reach of our own people.

To the Editor of

"THE CHINA MEDICAL JOURNAL."

DEAR SIR: I have the honor to invite you to participate in the International Congress on Tuberculosis, which will meet in Washington, September 21st to October 12th, 1908. Under another cover I enclose the preliminary announcement, and I trust that you will give the Congress such publicity as your valued JOURNAL can offer to such an undertaking.

International Congress on Tuberculosis.

The American Committee on the Congress is sensible of the great responsibilities resting upon it, and asks the aid of the scientific men of your country, in order that the coming Congress may merit the honor conferred on our country by the choice of Washington as a meeting place.

Very truly yours,
JOHN S. FULTON,
Secretary-General.

To the Editor of

"THE CHINA MEDICAL JOURNAL."

DEAR DOCTOR: I am offering you the latest in warm stages, so far as I know. As we have a lot of broken plate glass here, you are at liberty to tell your readers who live in China that I will have the warm stage made here for them complete for 50 cents Mexican, including postage to any part of China. The price includes the fenestrated metal strip. First come, first served so long as the plate glass holds out. I need not say that the above price is only what it costs me. Advise whether the stage is wanted for use with or without mechanical stage.

Yours sincerely,
O. T. LOGAN.

CHANGTEH, HUNAN, Sept. 30th, 1907.

[NOTE: Dr. Logan has made two to our order, and I am delighted with them. ED.]

To the Editor of

"THE CHINA MEDICAL JOURNAL."

DEAR DOCTOR: Hearty congratulations on the last MEDICAL JOURNAL. It is a valuable number. May their tribe increase, for which there is every sign.

The Title Question.

As to your query "A Question of Title," it is agreed in our medical firm that *woman physician* is preferred. Should I be designated as a gentleman physician, the inference would be ambiguous, to say the least. Not that one objects to washlady, saleslady, etc., but woman is a grand word, and let us use the grandest word we can find. It's worth while.

While I'm writing I would like to say that I have three valuable reprints along the line of present investigation work, all by H. B. Ward, Dean of Univ. of Neb. College of Medicine. He is in the forefront of workers along these lines in the U. S., and if the committee, or any member of it, would like to have these pamphlets, I shall be glad to send them, on condition that they be returned. The titles are as follows:—

Data for the Determination of Human Entozoa. (With plates.)
The Influence of Parasitism on the Host.
The Parasitic Worms of Man and the Domestic Animals.

Please pass this information on (if it be such) to the one you consider the proper party. Some time ago I sent Dr. Ward samples of oxyuris, filaria immitis, and ascaris lumbricoides. He has called my attention to the fact that the oxyuris sometimes bores through the wall of the rectum, sometimes producing ulcers and even peritonitis. The pamphlet above mentioned last is rather old, being printed in 1904, but the others are more recent.

With cordial Christmas greetings and best wishes for 366 days of the coming year.

Sincerely,

FRANCIS F TUCKER.

P'ANGCHUANG, December 19th, 1907.

Personal Record.

BIRTHS.

On November 30th, at London Mission, Hsiaochang, Chihli, the wife of EDWARD J. STUCKEY, M.B., of a daughter (Annie Harper).

On December 4th, at the London Mission, Tsaoshih, near Hankow, the wife of EDWARD F. WILLS, M.B., C.M., of a daughter.

ST. JAMES HOSPITAL, ANKING, CHINA.
South Front and West Face. Men's Department on left. Women's at right.

The
China Medical Journal.

VOL. XXII. MARCH, 1908. NO. 2.

Original Communications.

[All copy must be in the hands of the Editors one month before date of publication to insure appearance in the following number. The editors cannot undertake to return manuscripts which are sent to them. A complimentary edition of a dozen reprints of his article will be furnished each contributor. Any number of reprints may be had at reasonable rates if a *written* order for the same accompany the paper.]

THE OPSONIC INDEX OF THE BLOOD.

Paper read before the C. C. M. M. A. by Dr. J. G. CORMACK.

At the outset of my paper let me state frankly that I have not undertaken the preparation of this paper on "The Opsonic Index of the Blood" because I am an expert on the subject, or because I have long, practical experience of its use, but simply because the Council of the Association thought it would be well that this latest method of diagnosis and treatment of disease should form a subject at one of our meetings, and I was asked to give the paper. It will be understood therefore that though I have spent a considerable amount of time and thought on the subject, I am still as much a learner as anyone here.

To Dr. A. E. Wright, of St. Mary's, London, belongs the honour of working out and bringing to the notice of the profession this interesting and scientific method of treating disease. This he did by a series of careful experiments, and he has been followed during the past three years by many earnest investigators.

It has been known for many years that the white blood corpuscles of the blood can be kept alive outside the body; experiments can therefore be made with living leucocytes in test tubes and so on. Under the microscope the great Professor Metchnikoff watched some leucocytes engulfing or swallowing up bacteria by a process which we all know by the name of "phagocytosis." Phagocytosis is at the bottom of all estimations of the opsonic index. Briefly stated, Dr. Wright's discovery consists in the fact that phagocytosis only takes place when the blood has formed a substance which so prepares the bacteria that they can be

ingested by the white blood corpuscles. To this substance he has given the name "Opsonin," which means, "I cater for."

These opsonins do not destroy the bacteria, but seem to coat them in such a way that the white blood corpuscles are prepared to attack and swallow them. White blood corpuscles, apart from this substance, have probably no phagocytic power. The object of the treatment founded on a study of the opsonins therefore is to increase the amount of this substance in the blood, that the system will be helped to overcome any bacterial invasion. To treat a case we must therefore know the opsonic power of the blood, and this quantitative estimation of opsonins is known as the "Opsonic Index."

THE NATURE OF OPSONINS.

Our knowledge of the nature of these opsonic bodies is, up to the present time, far from complete, but the points established have been epitomised as follows:—

(a). The variable factor is present in the serum and, as far as concerns its quantitative estimation, is independent of the leucocytes.

(b). Opsonins are distinct from those substances which bring about bactericidal and bacteriolytic reactions.

(c). The opsonin passes from the serum to the bacteria and acts upon them in such way as to prepare them for ingestion by the phagocytes.

(d). Variations in the number of leucocytes in the blood do not correspond with similar variations in the opsonic index.

(e). In a large number of infections, *specific* opsonins can be detected in the serum.

(f). Opsonins are destroyed by being heated to 60 c. for a few minutes, as shown by Wright, Bulloch and Dean.

(g). The opsonic power of serum in vitro falls gradually, and even when kept at 8 c. in the dark, falls to half its original value in about ten days.

The opsonic index practically remains constant from day to day in the same healthy individual, but Dr. French has noticed that vigorous exercise, such as a twelve-mile walk undertaken by a person of sedentary habit, will sometimes cause rise from 1.0 to 1.2 or 1.3 on the following day.

When a dose of tuberculin or other bacterial vaccine is injected, it produces a definite oscillation in the opsonic curve.

At first the index falls, then it rises to a point above its original level; again it falls, but only slightly, and is then maintained for a variable period at this higher level. The first fall is called the "negative phase," and the subsequent rise the "positive phase." Urwick has noticed that there is sometimes a sharp rise before the negative phase.

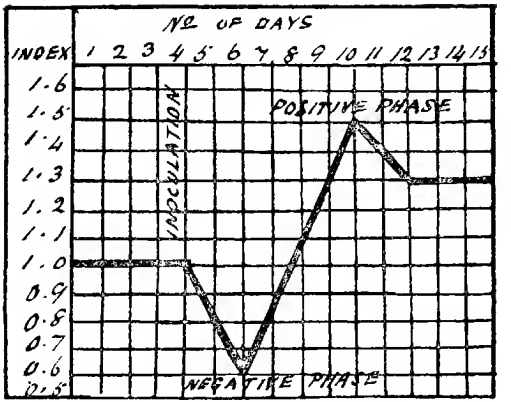


Fig. I. Chart of Opsonic Curve.

If an inoculation is given during a negative phase, there will be a further fall, and the succeeding positive phase will be long delayed or absent; an inoculation just after or during the positive phase gives rise to a small negative phase, and then a positive phase super-imposed on the first one.

An operation, a dressing, and exercise also give rise to a negative phase, followed by a positive phase.

Possibly massage and the application of X rays, or Finsen light, act similarly. Wright explains these changes as being due to auto-inoculation, and this view is favoured by the occasional occurrence of general tuberculosis after an operation. It has also been observed that nuclein, when injected subcutaneously, and yeast, given by the mouth as one large dose, will give a reaction on the tubercule-opsonic curve similar to that produced by a dose of tuberculin.

METHOD OF TREATMENT.

The ideal aim in treatment is to obtain a cumulation of positive phases and to avoid giving an injection during the negative phase. To do this it is necessary to take the opsonic index at regular intervals and to plot out the results on a curve; it is then easy to see at a glance whether the index is rising or falling. In staphylococcal injections the opsonic index can be raised and maintained at a high level, but in tuberculous cases it soon falls again; in spite of this, tuberculous

patients certainly do well under the influence of a properly interspaced series of tuberculin injections.

The clinical aspect of the patient is an untrustworthy guide, although he or she may feel and appear worse during a negative phase and better during a positive phase. In some cases the negative phase is often marked by objective symptoms, for instance, in acne, by a fresh crop of boils, and in gleet by an increased urethral discharge.

HOW TO TAKE THE OPSONIC INDEX.

The method by which this is carried out is thus described by Dr. Ronald French, of Guy's Hospital, London, to whom I am much indebted for his kindness in sending me the materials for this work and hints as to how it may best be done.

"Three preliminary operations are necessary, namely :—

(a). The collection of 10 to 20 c.mm. of serum from the patient and a like quantity from a normal person, carried out as follows :

Cleanse the lobe of the ear, and at the same time render it hyperæmic by vigorous rubbing with a piece of lint saturated with ether. Allow the ether to evaporate, make a small puncture with a surgical needle, and then, by gently squeezing the lobe of the ear, cause a few drops of blood to exude. Collect the blood in a small glass pipette with capillary ends ; seal the ends, and when the blood has clotted firmly, centrifugalise, so forcing the clot into the narrow part of the tube and leaving clear serum above.

(b). The preparation of a sufficient volume of human "washed" blood corpuscles, thus : Collect blood (approximately 0.1 cc. for each serum to be tested) from the ear of a normal individual, or of a patient anæsthetised for operation (after cleaning, etc., as detailed under (a)) in a sterile capillary pipette, previously moistened with sterile 1.5 per cent sodium citrate solution and transfer at once to a tube containing some 8 to 10 cc. of the citrate solution. Sodium citrate, it may be mentioned, by removing the calcium salts from the freshly shed blood, completely prevents clotting. Centrifugalise thoroughly to throw down the corpuscles and pipette off the supernatent fluid ; then add 10 cc. of sterile saline solution (0.75 per cent) to the corpuscles ; shake well and centrifugalise again.

This washing with normal saline solution is repeated with two further changes of the solution, and the cells are then ready for use.

(c). The preparation of a suitable emulsion of that bacterium against which the sera are to be tested.

The preparation of a bacterial emulsion varies somewhat with the organism to be emulsified. In the case of a coccus, saphylococcus, streptococcus, pneumococcus, gonococcus, etc., pour a sterile 0.1 per cent saline over the surface of a six to twelve hour growth in tube culture on sloped agar and shake gently. This produces a turbid fluid containing free cocci and clumps of various sizes ; transfer this to a small glass tube and centrifugalise for three or four minutes in order to throw down the clumps. To the experienced eye the opacity of the emulsion is sufficient to show whether centrifugalisation has been sufficiently prolonged, so that it is unnecessary to make a film preparation and examine it microscopically. To prepare a tubercle emulsion, grind up a small nodule of the growth from a glycerinated potato in an agate mortar (which should be moistened previously with a drop

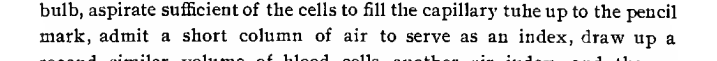
of sterile 0.1 per cent saline) to form a thick milky fluid, then dilute with 0.1 per cent saline, mix thoroughly and centrifugalise as for emulsion of cocci. If a large quantity of tubercle emulsion is made in this manner and sterilised by heating to 70 c. for an hour, it can be kept perfectly well, sealed off either in small glass capsules, or in ordinary capillary tubes such as are used for vaccine lymph. It is important to use 0.1 per cent saline for making emulsions, and not "physiological" (0.75 per cent) salt solution, as the latter frequently causes clumping to take place.

Transfer these four preparations, viz., patient's serum, normal serum, washed blood cells, and bacterial emulsion, each to a separate watch glass or small test tube, and label.

"After making these preparations the apparatus further necessary for the estimation of the opsonic index consists of a number of capillary pipettes with a ruhber "teat" or bulb attached to each, an incubator running at 37 c., a number of clean microscopical (3 hy 1 inch) slides and some watch glasses. The pipettes should he dry, sterilised and plugged at the large end with cotton wool; the capillary part should be 12 or 15 ceutimetres long and sealed at the extremity.

"Make a mark with either file or glass-cutter's knife near the sealed extremity of the pipette, break off the end "square" and make a mark with blue grease pencil, about 1 or 1.5 centimetre from the cut end. Now holding the pipette by the ruhber bulh, compress the latter between thumh and fore finger, dip the open capillary end into the receptacle containing the washed cells, and, by gently relaxing the pressure on the bulb, aspirate sufficient of the cells to fill the capillary tuhe up to the pencil mark, admit a short column of air to serve as an index, draw up a second similar volume of hlood cells, another air index, and then a third volume of blood cells. In a similar manner add one volume of bacterial emulsiou and two volumes of the patient's serum to the conteuts of the capillary pipette.

Fig. II. Sbape of pipette used by Wright.



A = Mark of Pencil. B. C. = Serum. D. = Emulsion. E. F. G. = Blood Corpuscles.

"The order in which these fluids are taken up is importaut, as the washed cells must not be contaminated with either emulsion or serum, and the emulsion must not be coutaminated with serum, for, if it were, opsonins might possibly he added to it, and these would then be passed on to the hacteria; a few blood cells present in the emulsion are of no consequence. When all six volumes have been aspirated into the pipette, compress the rubber teat and squeeze them out as one drop on to a slide or into a watch glass and mix thoroughly; the mixing being

done by sucking the drop up into the pipette and squeezing it out again eight or ten times; finally the drop should be sucked up into the pipette, the extremity sealed off in the flame, and the pipette labelled with a distinctive name or number.

"Now prepare a similar pipette with three volumes of washed cells and one volume of bacterial emulsion, but substituting two volumes of normal serum for two volumes of patient's serum. Incubate both pipettes together for fifteen minutes at 37 c., after which take each in turn, cut off the end, mix the contents once more, prepare a blood film and mark carefully. It is advisable to make two slides from each pipette, as one may be spoiled or broken. The blood films are easily prepared by the slide method: half the drop of blood is placed on a clean slide near to one end and the end of another slide held at an acute angle on the surface of the former, so that the blood runs in the angle between them. By drawing the upper slide in short jerks along the surface of the lower, a thin film is spread out; it is an advantage to have a free edge to the film as the polymorphonuclear cells collect along this edge. Fix the films in equal parts of alcohol and ether and stain secundum artem; those containing tubercle bacilli must be stained by the Ziehl Neelsen method and counterstained with toluidin blue; for cocci, staining for half a minute with toluidin blue gives perfect results.

"Next with a 1-12 inch oil immersion lens, and using a mechanical stage, count and note the number of bacteria in each of the first fifty polymorphonuclear cells that come into the field. The normal serum is taken as having an opsonic index of unity, so that the number found in fifty cells on the normal slide, gives the opsonic index of the patient.

OBSERVER.	PATIENT'S SLIDE.	NORMAL SLIDE.	INDEX.	AVERAGE.
A	197	202	.975	.942
B	292	218	.925	
C	140	151	.927	
A	125	155	.806	.894
B	172	214	.804	
C	105	98	1,071	

Each observer counted fifty cells; though the counts differ the averages are fairly approximate; the personal error in counting being the same for the patient's slide and the normal slide.

When several sera are to be tested against one organism, the same control (i.e., the same normal serum) will serve for all."

In addition to the foregoing, Dr. French sent me the following hints in a private letter :—

(1). We only use the pipettes once, but they can readily be made by drawing out glass tubing in a gas blow pipe flame.

(2). We no longer use absolute alcohol and ether as the fixing re-agent, but use methyl alcohol; the process is quicker, taking only twenty to thirty minutes instead of two hours, and the methyl alcohol can be used again six or eight times, or possibly even more often.

(3). Don't use the same lot of stain too often.

(4). Counter staining with carbol methylene blue is simpler and more uniform in result than toluidin blue or Leischman. Half a minute in the diluted stain is, as a rule, quite sufficient.

(5). Take great care if you warm the fuchsin that it does not get much over 60 c. or the white cells get broken up and drop out from the films.

(6). In some forms of centrifuges a very rapid speed can be obtained; in the preparation of washed blood cells do not centrifugalise too rapidly, or the white cells will be broken up and you will be very disappointed to find a series of slides with no or very few white cells in them.

(7). There is a new and less troublesome method of doing tubercle opsonins, but I do not know how it will turn out; the emulsion of tubercle bacilli is stained with fuchsin previous to mixing the serum, cells and emulsion together. Phagocytosis takes place all right, but whether the results are the same with this emulsion I do not know. There is one great drawback, namely that the bacilli become deposited at the bottom of the emulsion and have to be very thoroughly shaken up before the emulsion is used.

(8). We always make up a large volume of emulsion now and keep it and take out a small quantity when we want it.

"Having by this means got the opsonic index of the patient's blood, the next step is to endeavour to improve that index, so that, if possible, you can make phagocyts take up 200 instead of 100.

CHOICE OF CASE.

"It is not every case that is suitable for treatment by inoculations. No one would dare to inject more poison into a patient who is already septicæmic. Again, a case whose immunising defence is breaking down, as indicated by very marked variations in the index, is unsuitable; if more poison is added to the system, a beneficial reaction cannot be expected. The most suitable cases are those whose index is low, and whose focus of infection is strictly localised, for it is easier and more beneficial to raise a low index than to produce a rise in an index that is already high."

THE INOCULATION.

"For inoculation, vaccines of known strength must be prepared, as the most satisfactory results are obtained by using vaccines prepared from the organism cultivated from the patient's own lesion and

standardised, so that a given unit of volume shall contain either the dead bodies of a definite number of bacteria, or a definite weight of bacterial protoplasm.

"The vaccines in general use at the present time are simply watery emulsions of bacterial cultivations prepared in a manner somewhat similar to that already described, and, after centrifugalisation, diluted to contain some convenient number of bacteria, e.g., 500,000,000 per c.c., sterilised by heating to 65 c. for an hour, and finally sealed up in capsules, in doses of 1 c.c. till required. For tuberculous cases Koch's tuberculin (T. R.) diluted with 0.75 saline is used; this, like other vaccines, needs sterilising, as living tubercle bacilli are occasionally in the fluid when it is purchased.

"The inoculation must be given with strictly aseptic precautions. It is convenient to use an ordinary sterilised hypodermic syringe and to inject into the loose subcutaneous tissue of the abdominal wall, flanks or shoulders."

RESULTS.

The results as seen at Guy's, have been, so far, very encouraging, in spite of the fact that many of the cases treated were regarded as hopeless from a surgical point of view.

Vaccine treatment, with or without estimation of the opsonic index, is not a means of working absolute miracles, and it must not be supposed that all other forms of treatment at once become unnecessary.

Vaccines stimulate the system in its resistence to infection. *Alone* it will bring about a cure in but few cases. Other methods of treatment must be used in conjunction with it. So long as a patient has a focus of disease, he is liable to re-infection. It is therefore important that such foci should be removed surgically as completely as possible, but preferably this should not be done until the opsonic index has been raised. It is strongly to be recommended that operations, and particularly those on tuberculous patients, should only be performed during the positive phase following a preliminary injection of tuberculin. The negative phase due to the operation would then be superimposed on a positive phase of the reaction to the injection and would be harmless, whereas, if superimposed on a negative phase due to unobserved autoinfection, the cumulation of negative phases might easily result in general tuberculosis.

Several cases of acne have been quite cured when all other treatment had absolutely failed. In cases of localised tuberculosis great improvement has resulted, so much so that Wright is able to say of his method of treatment: "It is not a question of the achievement of success

TRUE DERMOID OF TESTICLE.
Dr. Kuhne's case, showing the patient before operation.

SARCOMA OF TESTICLE AND CORD—Extending into abdomen.
Dr. Jeffery's Case.

The tumor contained thin layers of bone and cartilage enclosing pulpy cell masses and clotted blood. Scrotal tumor was 10 inches antero-posteriorly and 8 inches across.

in a certain percentage of cases only; up to the present it has been a question of uniform success."

In conclusion, let me say that though the process of treatment by vaccines controlled by a study of the opsonic index of the blood may appear to be too complicated to be of practical value to busy, overworked medical missionaries, yet we ought not to neglect the study of a method of treatment which has already yielded such splendid results. The day may not be far distant when vaccines of the various organisms will be prepared as calf vaccine is prepared now, and the times between the negative and positive phases following injection in each specific vaccine so well worked out that in many cases the necessary estimation of the opsonic index may be dispensed with. Till then, however, there must be careful watching of the opsonic indices if we are to attempt treatment on this line.

It would be well if in all our hospitals we could have a man trained to do this work, or, what is perhaps more feasible, laboratories in large centres, where the clinical work might be carried out and the information given to the doctor, so that he can go on with this treatment with scientific certainty.

P. S.—The diagram and most of the facts have been taken from Dr. Ronald Freuch's paper, which appeared in the *Practitioner* of July, 1906.

A RARE TUMOUR OF THE TESTICLE.

By Dr. JOHN E. KUHNE, M.B., C.M., Tungkun.

Allow me to send a specimen for the museum, at the same time giving you the clinical history of a boy whose trouble is here depicted. The parents, people from the country, are young and show no trace of syphilis; they have had three children: one who died of plague when four years old, another, who lived a few days only, and this one nearly four years of age. At birth the scrotum or rather the testis was of the size of a small orange, not hard says the mother; the swelling enlarged gradually, and this year in February the inguinal glands got involved. The child, nursed by his mother, is well otherwise. The penis is easily felt and well seen in the photo; the black line being the prepuce. The growth gave an elastic feeling, and being somewhat transparent let us at first think of an infantile hydrocele.

A puncture was made on the 22nd day of June and some bloody serum evacuated. A second one was made three days after; this time

introducing the needle deep into the tumour; some pus came through the canula which microscopically showed crystals of cholesterine.

The parents wanted to have an operation performed, and Dr. Eich, who for a short time was prevented from using his right hand, asked me to operate. We at first made an incision over the inguinal glands. Having found and tied the spermatic cord we removed the glands as thoroughly as we could; prolonging the incision downwards the testis was easily removed as a whole, leaving the left testis in situ. The child at first did well, the wound of the scrotum healing rapidly; the wound over the glands, however, gave some trouble, and when the child left the hospital some twenty days after, a swelling was felt, proof of a recurrence of the growth. We have not examined the growth and would be very grateful to get your opinion about it. The specimen has been for a night in alcohol and has shrunk somewhat; afterwards it was put in formaldehyde. Hoping it will reach your hands undamaged, I make my best wishes for the success of your work and of the JOURNAL.

REPORT ON DR. KUHNE'S TUMOR SPECIMEN.

The specimen consists of a regular oval tumor of the entire testicle, about six inches long by three and a half inches broad and circular in the transverse section. On longitudinal section there is first a thickened serous covering, next a half inch or so of organized blood clots and within this again, series of two or three thin shells of cartilage and some true bone, and including between them blood vessels, testicular tissue, sarcomatous patches and epithelial detritous, and in the upper half some matted short black hairs. The cord is thickened and adherent to its surroundings and especially to some of the inguinal glands, which on section show patches of pigmented round-celled sarcoma. For confirmation of this point, a section was submitted to Dr. Alfred Moore, of the Shanghai Health Office, who reports as follows :—

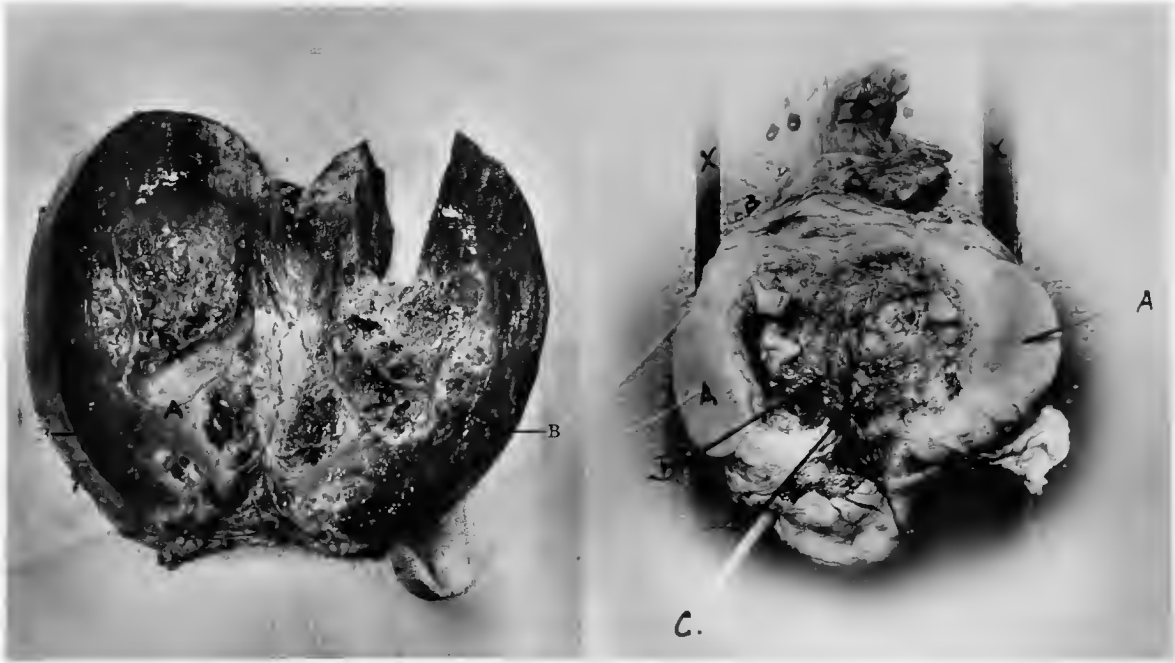
HEALTH DEPARTMENT OF THE SHANGHAI MUNICIPAL COUNCIL.

Laboratory Report No. 5,297.

TO DR. W. H. JEFFERYS.	SPECIMEN RECEIVED.	8.10.07.
	REPORT SENT OUT.	25.10.07.
Specimen tumour from inguinal region.		

This tumour presents the appearance of a pigmented round-celled sarcoma. May there not have been some sarcomatous elements in the associated testicle tumour? Stained specimen herewith.

A. MOORE,
Asst. Health Officer.



TERATOMA (DERMOID) OF THE TESTICLE.—Dr. J. E. Kuhne's case, Tungkun.

A. Layers of bone and cartilage.
B. Old organized blood, probably due to puncturing.
C. Hair and epithelium.
D. Epithelial detritus.

TERATOMA OF THE EPIDIDYMIS.—Dr. A. F. Cole's case, Ningpo.

A. Testicle.
B. Bone.
C. Sinus (old) into the tumor.
D. Cord.

A photograph of the testicular tumor, showing tbe structure quite plainly, is submitted. Note particularly the central bone and cartilage enclosed cavity which contained soft epithelial detritous.

For comparison a photograph of Dr. Cole's specimen (see his own report thereon below) in which the testicle proper is not involved. Also a photograph of a case under my own care, which was inoperable at the time of first inspection, but ou incission proved to consist of sarcomatous tissue and thin bone plates as in Dr. Kuhne's specimen.

W. H. JEFFERYS.

DERMOID OF TESTIS.

Case of Dr. A. F. COLE, *Ningpo.*

Patient aged thirty-six, right side of scrotum from childhood larger thau left. Nine months before admission to hospital knocked himself on side of a ferry boat, resulting in chronic discharge from a sinus at bottom of scrotum ever since.

Excised, together with adherent skin.

Ou subsequent examiuation the body of testis and cord quite normal. Evidently dermoid of paradidymis from facts :—

(1). Flat bony plates lining walls of cyst.
(2). Moveable protuberances like tips of fingers.
(3). Thick yellowish material (sebaceous type).
(4). History of congenital origin, or certainly over thirty years.
(5). Testis normal.

No microscopic examination was made of the cyst walls before the specimen was deposited in the Pathological Museum of the China Medical Association. No hairs were found.

In Mr. Blaud Sutton's work on "Tumours, Innocent and Malignant," fourth edition, page 533, the following is found :—

"The rarity of testicular dermoids may be gathered from the fact that as far as I can ascertain, during the last twenty-five years three examples have been recorded in England, and of these one came from India, and another from Central China was sent me by Dr. Booth, and is now in the museum of the Royal College of Surgeons."

I. THE JOHN G. KERR REFUGE FOR INSANE.

[The writer, by request, will try to present a series of articles upon the work for insane as carried on here, going somewhat into detail in the hope that any little experience already gained may be of help to others who may have in mind the opening of similar institutions elsewhere in China.

The two subsequent papers will be entitled respectively: Forms of Insanity in South China, and The Treatment of Insanity.]

THE OPENING OF A HOSPITAL FOR INSANE,

ITS FOUNDER AND ITS NAME.

This institution was opened in 1898 by John G. Kerr, M.D., LL.D., near the close of a long life spent for the Chinese in loving, active service as a medical missionary. Dr. Kerr was an American and was connected with the Presbyterian Board, North. But a work for insane being in a path until then untrodden in China and its need at the time appreciated by but few, was necessarily undertaken as an entirely independent enterprise, and thus far it has so remained. After his death the founder's name was added to the original name, "The Refuge for Insane."

It being a pioneer work, it is not strange that the experience of succeeding years should have shown defects in the first plans and how some of them might be remedied.

The name "Refuge" is unhappily chosen. The institution is much more than a place to which the insane may flee for protection, and it gives a wrong impression as to its aim. Rational means are used, looking directly toward the cure of the acute cases. It were better named "Hospital," since this term is everywhere, even if arbitrarily, used to designate a place of healing. Throughout New York State and in some other places in America the name "Hospital for Insane" has been substituted for the old term "Asylum for Insane," as being more correct and as having a pleasanter sound in the ears of the friends of the inmates. In Germany the term used is: Institution for Healing and Nursing.

LOCATION.

The hospital is located across the river from the city of Canton, at Fong-tsün. Nearly all the patients are brought by boat.

An institution of this sort should always be situated somewhat removed from a city or at least in a place where abundance of land may be secured. This is for reasons which will appear under the next heading. The distance should, however, be such that friends can, without too great difficulty, reach the place; because it will be found that

THE JOHN G. KERR REFUGE FOR INSANE, CANTON, CHINA.

in certain cases people who have friends at the hospital are exceedingly solicitous about their welfare, and perhaps suspicious, and will wish to come often to see how they are being treated. We have from the first made it our policy to allow them to come at any time, requesting only that they do not come on the Sabbath. This policy has been found to be a wise one, especially during the first years. Now, however, while not forbiddiug it, the friends are sometimes advised and requested to come only occasionally and the reasons explained. They usually comply without objectiou.

GROUNDS.

The first purchase of land amounted to about four and half English acres. The patients having largely increased in numbers during the last year, it has seemed wise to add to this. Already some small pieces lying adjaceut have been procured; and we hope to have within a year about seven acres in all. This is not much land for such au hospital. It is almost absolutely essential that there be large grounds and for several reasons.

(1). Many of the patients are there for life and must be made as comfortable as is possible.

(2). But it is particularly the protection of the insane from inconsiderate outsiders which demands that the grounds be large enough to allow of the buildings being quite removed from places from which annoyances might come. We have been much troubled here because of the near proximity of our buildings to land which has recently become a public tramping ground. Many men and even some women and children gather at this place to watch the insane, especially the women, who come to the windows, being entertained by their gestures and their scolding and impure or otherwise excited talk. In some cases these people have thrown up sand and stones into the windows and in other ways excited the patients to talk and scold. Again, matches have been stuck into the end of bamboos and passed over the wall to patients at the windows. Again thoughtless people have shouted some little distance across the grounds: "Crazy woman," which epithet is exceedingly distasteful to those who are not demented and who are conscious, as many are, of their condition. The patients should be saved from these annoyances, because they must tend to make their condition worse. Hence the plea for a location outside the city, where abundance of land can he procured and the buildings placed well away from the boundaries.

(3). Another advantage in having large ground is that the cottage system may be used. This consists in having smaller, scattered, home-like buildings instead of one large institution-like edifice. For the sensitive patients this is more agreeable. The noisy patients can be thus also far separated from those who are quiet.

(4). Then again, the inmates of these institutions are likely to grow in numbers as the Chinese learn more and more their value. And it may turn out also that, just as in the home lands, the actual number of the insane is increasing.

(5). Large grounds further afford opportunity for flower and vegetable raising, which provides work in which capable patients may busy themselves.

Thus far our men and women have had the grounds in common. But we hope soon to get hold of an adjacent piece of land which will give the women an entirely separate running place. This is as it should be, the men and women entirely separated. The care of the women will be easier then.

The trees which stand in the grounds afford shade, which is very grateful to the patients during the summer months.

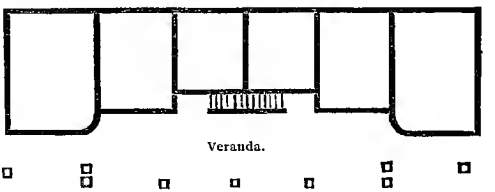
The grounds are surrounded by a wall. This is indispensable here and, as the grounds of the Chinese are usually thus surrounded, it probably does not offend the feelings of the patients as it would at home. The tendency in the home lands is to do away with everything that can suggest the idea of being shut in. When the grounds are very extensive they are surrounded by a simple fence of ordinary height and over which a man might easily leap. This does away with the impression that one is imprisoned. Under these conditions patients must be well watched, however, and each attendant is responsible for those under his care. In China, where there is so little consideration for this afflicted class, it is probable that without a good wall the inmates would be subject to many annoyances from the outside.

BUILDINGS.

Suitable buildings must be different from the same class of buildings at home just as foreigners' houses must be different and suited to the climate in which they are living.

Being pressed for room we have had to make use of several buildings already on the grounds and not put up for the purpose; we have also built several matsheds to help out.

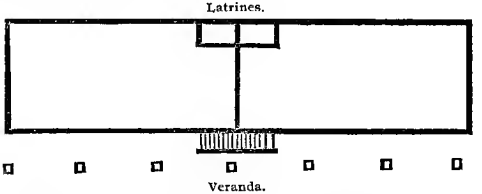
Our first buildings, two in number, put up specially for the insane, are built according to the following plan :—



These are tastefully designed and, for a hospital of another kind, would be well adapted to the purpose. But there is one objection to this plan when used for the insane. These patients must be constantly

under watch. The two end rooms are wards large enough for seven beds each, although in fact they have had to be made to hold nine and sometimes ten. Of the ordinary run of patients one such ward is not enough for one attendant, especially here, where expense is a matter to be considered. The four between are private rooms. No attendant can be in two places at the same time. If one man has charge of two small rooms as well as a ward, he is necessarily absent from the latter (where he is needed most) when engaged in the former. The ward at the other end of the building is so far removed that he must likewise be away from one set of patients when present with the other, although if united in one ward he could take charge of the whole number almost as easily as of the half.

Our new building just being completed is planned thus:—



Each ward will hold fifteen beds. This number of the usual run of patients on most occasions can be managed comfortably by one attendant.

But there must be private rooms as well for the better-to-do class. We hope to be able some day to put up another building, consisting of private rooms only. These are always in demand. Frequently patients must wait, because no private rooms are free. In many of our rooms planned for one person, we must have two and three, and this is difficult to manage, because they must be carefully selected as to relative compatability of temper. We plan that such a new building shall have its own grounds separate from those of ward patients; for the more wealthy and refined are sometimes offended by the vulgar habits of certain of the former and do not feel comfortable where they must see them. Usually one attendant can look after several private rooms if there is only one patient in each; because separated patients cannot harm or irritate each other, and hence they need less watching.

Our buildings have two floors, and this is sufficiently high. Some at least of the newest and best in the home lands are thus built.

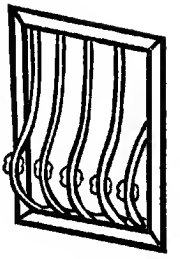
The walls of our buildings are three-brick thick below and two-brick above. Although here and there a few bricks have been loosened, no hole has been made in these walls. But in the case of some other smaller buildings which were on the grounds and which, though not put up for the purpose, must be used for patients, bricks have been taken out by using a stray nail or a chopstick and a hole made large enough to effect an escape. This has happened over and over again and not only in case of a one-brick wall but even in one of two-brick thickness, where little mortar had been used and the inmates had been left too long without watching.

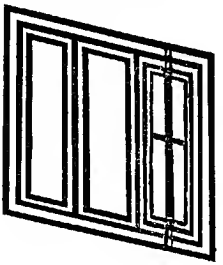
Our old buildings have tiled floors. The tiles are objectionable from the standpoint of cleanliness and of warmth in winter; urine and feces will sometimes reach the tiles and penetrate to a certain extent. And in winter such patients as will not wear shoes, but only the straw sandels we provide, are likely to suffer as the result of cold feet. Moreover, the tiles often get broken and the fragments have sometimes been used as weapous to inflict injury upon self or others.

The floors of the new building are of cement concrete, both above and below. These will be easily kept cleau and will give security from fire, which is a great source of comfort. But they are not a perfect floor. Indeed it is doubtful whether it is, after all, wise to use this material because of the danger of patients hurting themselves if they fall. There is sure to be a certain number of epileptics among the insane, and their seizures cannot always be prevented. They often bruise their faces on the tiles. It is to be feared that in the passage ways on the concrete floors we shall have to lay down a kind of matting made of split or small, unsplit bamboos strung together with small wires. This can be easily washed and rolled up for removal when desired. Common matting could not be used here as it can in the home lands, because many Chinese have the dirty habit of expectorating anywhere and everywhere aud throwing fragments of food upon the floor. It would be very difficult to keep matting clean. Probably no floor is better than one made of well-seasoned hard wood; the pieces being fitted closely together and the narrow cracks filled with wax or other appropriate material. This can be easily cleaned, and there is little danger if patients fall; their feet will not become chilled in the winter time, nor will there be fragments to be used as weapous. When we again build we shall in all probability put down these hard wood floors.

Our windows are all provided with straight, upright iron bars. Undesirable though it is to use these bars, it would, in most cases,

be necessary here. An attempt is made at home to overcome this semblance of a prison so as to save the patients the feeling that they are locked in. In some cases instead of straight bars, ornamental ones are used, as shown in this diagram. The best plan is, no doubt, the use of a peculiar form of window as shown on the left hand side. The two heavy bars are ornamented by moulding. The spaces are filled in with sashes of iron provided with thick glass and so constructed as to turn around a vertical bar running through the middle of the sash, thus: The spaces between these small iron bars and the heavy ones are too small for any one to pass through, and yet there is nothing to give the idea of prison bars but rather that of a handsome window. This is, however, necessarily expensive. In case the grounds are sufficiently large to permit of the cottage system being used, then some of the buildings may be set apart specially for quiet patients and the windows made without bars. Being pressed for room this year, we have been using matsheds for such patients and have had nothing to regret.





In the wards of the new building all corners are rounded off in cement mortar, giving the least opportunity to patients to do injury to themselves and making the cleaning an easy matter. All wood work around the doorways and windows is done away with, excepting the piece which goes across the top. The doors and venetian blinds are of wood, well made, strong and secured by strong hinges. One part of each hinge is built into the wall, the other forms a strap which reaches more than half the distance across the door or blind. This is a necessary precaution which we have learned by experience.

In the first buildings all windows were originally provided with glass. In course of time every pane was broken, and it soon became evident that it was useless to replace it unless it be to furnish certain patients further opportunity to do damage. Moreover, the shutters of the venetian blinds have been broken over and over again. The

reason for this has been that patients have been left too much to themselves either because of the number of attendants not being sufficient or from lack of watchfulness. But these experiences have prejudiced the writer against the use of glass and movable shutters. Furthermore, the climate being mild, with but a few months of inclement weather, it was decided that in the new building both might be dispensed with. But each window is provided with blinds having immovable slats. These blinds, when closed, will keep out the direct sunlight in the summer and the rain, while permitting the access of air, and they will not be easily broken. During the few months of inclement weather a piece of zinc will, by a simple device, be placed tightly over the slats on the inside of each blind on those sides of the building which are exposed to the cold wind. On days when these blinds must be closed, sufficient air and light will enter from the other unexposed sides.

Our bathing facilities have been very poor thus far, but when the new building is ready for use, two of the old wards will be turned into bath rooms: one for women above and one for the men below. Good rooms for this purpose are very essential; because, as will appear in a later paper on "Treatment," the use of the continuous bath in the case of disturbed patients, has now come to be not a luxury but a necessity. And more than that, if any class of people need washing it is the insane. Ample provision must therefore be made for good bath rooms and plenty of water. Those rooms used for the continuous bath should be large enough of themselves, or in close proximity to other rooms, to allow of the patients resting in bed after removal from the bath. Our water for the baths is heated in the kitchen and carried in pails. This is a crude way but, after all, the most practicable for us here; as it obviates the necessity of having fire in the bath rooms. Fire in these rooms would be a source of danger to certain patients and would therefore require close watching; it would be a source of danger to the building, and it would add still more to the already great heat of the rooms during the many months of summer weather.

The matter of latrines is a difficult one to manage where one has not running water. We use buckets made of heavy wood. Wooden commodes are out of place, as they are hard to keep clean and are liable to be broken to pieces. The covers of the buckets are thrown out of the windows or used as weapons to be thrown. In the day time the men go to an out of doors latrine, but the buckets must be in the rooms at night. This is offensive and unsanitary. In the new building each ward will have a corner partitioned off in which will be stationary

commodes built of brick with the surfaces cemented. They will be provided with galvanized iron buckets which fit perfectly. Provision will he made for a draught of air upward to the roof.

The ground floor of the buildings is giveu up to the men. The women must be specially protected. For this reason they are all on the second floor, excepting a few who, for lack of room, must occupy a small buugalow. Still better, if practicable, would be that men and women occupy entirely separate huildings. For this reason also the locks on the doors are all such as only the women attendants can open. When the new building is finished all the men's rooms tbroughout the hospital will be provided with locks which can be opened with one key. Each male attendant will have such a key. And all the women's rooms will he provided with another set of locks, all opened by anotber and different key and each woman attendant will have such a key. Thus in an emergency any woman attendant can open any of the women's rooms, private or ward, aud any man attendant cau open any one of the men's rooms, but no man can open a woman's room.

In a part of the country where mosquitoes abound, the placing of the buildings is a matter of no small importance. They should be so placed in reference to the prevailing wiuds as to insure the greatest freedom from these pests, because the insane may not indulge in the luxury of mosquito netting unless it be a patieut who does not smoke or would not be likely in any case to tear or hurn it, or unless he be in a private room with a private attendant.

CLASSES OF PATIENTS.

There are now over one bundred and fifty inmates. They are from every walk in life—from the yamên and from the street. Of the latter some, when brought, have the appearance of having been very much neglected. Some come long distances; the longest being from Sbanghai, although now we are expecting one from Chinkiang. We were also expecting one from Chefoo, but received word that the patient had died suddenly. They come originally from many provinces, from as far north as Chihli and as far south as Singapore.

RELATIONS WITH OFFICIALS.

In a country like China it is not necessary to have passed a strict government examination before setting out to practice medicine. But the people have sometimes been known to take things into their own hands when, looking for a pretext to do violeuce to foreigners,

they have found such pretext in the death of a Chinese patient treated by a foreign physician.

Unless one had obtained the sanction of the officials to whom one might look for protection in an emergency, it would probably be unwise to open a hospital for insane; because there are likely to be injuries inflicted by patients on patients and, unless carefully watched, other social crimes as well, which might easily be made a pretext for violence against the foreign superintendent. We have been very careful to guard the women and have been well rewarded in having had but one experience with social crime.

This hospital was opened under very favorable conditions. Dr. Kerr had spent a long life in Christian medical work for the Chinese. He was well known and enjoyed the esteem of both people and officials. Any attempt made by him to help this afflicted class was sure to receive the commendation of both. The fact is we have never had even the semblance of any trouble either with the people or with the magistrates. We attribute this largely to the fact that the hospital has always been open to inspection. Many come and at all times of the day to watch the patients, and it must he widely known that they are kindly treated and that nothing is done in secret. As a usual thing, when bringing patients, the friends show no fear but, on the contrary, perfect confidence.

But very occasionally it has occurred that insane persons have had to forego the life and treatment in the hospital, because their friends refused to leave them unless some of the family (and in one case the whole family) should be allowed to live there as well. So fully has the hospital the confidence of the officials that at least one-third of the inmates are sent and supported by them.

SUPPORT.

The land has all been bought with foreign money. The two old buildings were erected in the same way, the new one not entirely so. All this money from foreigners has come in the form of voluntary gifts. But the time has come, in the judgment of the superintendent, when the Chinese should themselves provide for all further accommodation in the way of buildings and other improvements.

The running expenses, including the assistant Chinese physician's salary, are all covered hy the income from the patients and small gifts which come occasioually. The income from those who rent rooms is an important item and more than makes up for the few who can pay nothing. The cost of those occupying a ward is $4.00 or $5.00 accord-

ing to their food. For the monied people, we furnish a more elaborate menu for more money.

The writer wishes just here to express his gratitude to Rev. Alfred Alf, of the American Bible Society, for his interest and invaluable, voluntary help, especially when the former has had to be away from Canton for a time. During the long absence of the superintendent and family, while on furlough in America, Dr. H. W. Boyd, now of the Presbyterian Mission, took charge of the hospital. He was soon afterward called to the Canton Hospital.

The number of patients has recently increased so fast as to entail too much work upon one foreigner. It has become necessary to ask another physician to come from home to act as assistant foreign superintendent; the prospect being that when he shall have become conversant with the language and the people the number of patients will require the time of two physicians. All expenses of salaries, dwellings and travelling have been and must still be met by special money, and this the Master has always provided and, we believe, will still provide. A physician has already signified his willingness to come, and he will probably reach here early in the New Year.

CONCLUSION.

Since love to God and man was the motive power in the undertaking of this work, one cannot conclude a paper on "The Opening of a Hospital for Insane" without giving the praise all to Him whose love for man first begot a kindred love in the heart of the founder. And it is the first desire of the present superintendent that the hospital stand ever as a monument of God's love to man, and that not only in an indirect way but directly also it be used to publish the gospel of our Lord Jesus Christ. Six mornings we meet—attendants and other helpers and the quiet patients—for the reading and explanation of a short passage of Scripture, prayer and singing. On the Sabbath there is preaching service and Sunday school. One mid-week evening we meet for Bible study with the attendants and other helpers and such patients as have recovered. Another evening is spent in the singing of sacred songs, when also a very short gospel talk is given. Among the recovered patients a number have publicly confessed conversion to Christ, and we believe that even among the slightly demented there may be those who can understand enough of God's message of salvation to be saved. In this work we have two valued helpers in a native evangelist and a native Bible-woman, who also try to bring the gospel message to the outsiders who visit the hospital.

TWO MUSCULAR CASES.

H. H. Weir, M.B., M. R. C. S., Chemulpo, Korea.

The two following cases present some points of interest, and their difficulty of diagnosis must be my excuse for writing about them.

A coolie aged twenty-six was admitted suffering from pain and swelling in the left iliac fossa. No history could be obtained beyond the fact that he had had both symptoms for ten days. The left thigh was partially flexed, but movement in every direction, save that of full extension, was quite free, and there was no pain on jarring the leg. Above and parallel with Poupart's ligament on the left side was a hard tender mass about four inches long and raised above the level of the abdomen, very much resembling an appendix abscess, but of course on the other side. The abdomen moved well and his tongue was slightly furred. The diagnosis on admission lay between an abscess of some kind and a possible mass of worms. He was given an enema, which resulted in a fairly large motion, including a round worm, and ova of ascaris and of tænia were also found. He had an evening temperature of 99.8 F. and his pulse was also raised then to 100. More worms were obtained, but his condition did not improve at all and his breath was very foul, so that on the fourth day an operation was performed with the expectation of finding pus in the iliac fossa. This expectation was not fulfilled, but all the tissues under the superficial fascia were found to be very oedematous. The internal oblique and transversalis muscles were tense and almost gellatinous, swollen to a thickness of nearly one inch, and on pressure clear serous fluid oozed out almost frothing. Owing to the swelling it was not possible to be sure whether the peritoneum was divided or not, but certainly no opening was made into the general peritoneal cavity. Having explored pretty thoroughly without finding more than this, the wound was sewn up with a small gauze drain in one corner, and that night the temperature was subnormal. It rose again, however, for a couple of days as far as 100 F., but after being dressed, when the drain was removed and a small quantity of dark serum squeezed out, it fell again and has remained down ever since. The dressings were repeated every two days, and on each occasion for the first few times some more fluid was removed, but now the wound seems to have healed, and the tumour is quite gone, though there is still some induration along the course of the wound. Nothing resembling trichiniasis could be seen in the section of the muscles at the operation.

The second case is apparently of a medical nature. A boy, aged fifteen, in seeming good health, was suddenly giddy and fell when walking. He thinks he lost consciousness momentarily and afterwards had some pain and weakness in the right arm and leg. A few days later he began to have twitching movements in these limbs and was brought to the hospital a fortnight after the illness began. On admission his pupils reacted well, and there was nothing definitely amiss with his ocular movements, though some hesitation was observed, not apparently pathological. The tongue was protruded slightly to the left, but not enough to indicate any real paralysis, the right arm and leg were distinctly weaker than the left. Knee jerks were easily obtained, but rather flacid in character. At quite irregular intervals he is seized with attacks of twitching in the affected limbs, of a clonic character. Sometimes he will have several in the day and sometimes none. The attack lasts a few minutes and is painful, apparently like cramp; the movements being quite forceable and general in the muscles of both arm and leg. Of course the case is, in some ways, suggestive of epilepsy, but there has been no loss of consciousness except in the first instance, and it has also points of similarity with paramyoclonus multiplex, and I do not feel prepared to come to any conclusion about it as yet.

I should be very grateful for any suggestions from members of the Association as to these two cases.

AT DEAVER'S CLINIC.—A SKETCH.

By C. S. F. Lincoln, M.D.

Every professional man has his Mecca, whither he journeys for communion with all that he holds most sacred in his professional faith, as well as for inspiration to greater achievement and more earnest work in the future. Each man has a prophet or seer in his particular line, to whom he traces that inspiration and in whose work he glories even as in his own.

In a professional family like our own the visions will be of many lands and cities and of men more or less distinguished in the world of healing.

Between the cities in America that are celebrated as centers of medical and surgical knowledge it would be invidious to draw comparisons; each has its special advantages and its coterie of brilliant

men. But for all who have studied there and known the charm of the place and the men, the old city of Philadelphia will always have a peculiar claim.

As I met and mingled with the students of the different schools and with many of the younger men in active practice, one of the most common questions asked would be, "Have you seen Deaver operate?"

It is not always easy to analyze the traits that make a man more illustrious in the eyes of his fellows than many of his contemporaries, who are probably equally clever. It is, I suppose, generally speaking, ability plus that indescribable influence which we call personality. The thousands of students who have sat upon the hard marble benches in that trim little amphitheatre at the German hospital, watching with eager interest the various steps of some difficult operation and listening with smiles to the sallies of Irish wit, have felt and recognized those qualities in John B. Deaver.

There is a sense of security and peace in that little amphitheatre that inspires confidence. The serene, comfortable looking German deaconesses, the cleanliness and sunlight, and the motto over the door through which the patients are wheeled in from the anæsthetizing room, *noli loqui, noli tangere*, all promise a sort of premium on longevity.

The assistants come in and begin to clean up, and in a few minutes Dr. Deaver himself enters; a plain well built man, with a strong face indicating Hibernian ancestry; every movement showing the force and energy of his character, and when he begins to talk the interest deepens.

He sketches briefly the history of each case, making a differential diagnosis if necessary, and then goes at his work with an ease and dexterity that are the admiration and envy of those who watch him, explaining each stage of the operation as he proceeds, with many bits of homely advice to both practitioner and student in his quaint epigrammatic style.

Every man has a hobby, which he loves to ride at times, and Dr. Deaver's is the vermiform appendix. In his opinion, and it is one not to be thought lightly of, no appendix has a right to remain. It is very doubtful if any case requiring abdomenal section ever comes from under his hand with an appendix left. "Oh gentlemen!" he says, "if you saw as many cases a year as I do, and could see the mischief that is done by treating appendicitis on the expectant plan, you would feel as

I do. Whenever I meet a doctor who is imbued with the idea that it is easy to cure appendicitis without resorting to surgery, and is laboring under the delusion that appendicitis is not such a dangerous disease after all, I iuvite him to come to my clinics for a week and he gets salvation."

Probably not a day passes that he is not operating at "the German," but on Saturdays at 1.30 p.m. are his regular operative clinics, open to both students and practitioners, and before the hour the benches are crowded, both sexes being represented.

Here is an afternoon's work, and rather a short one at that.

CASE ONE: Appendectomy.—Unusually high situation of the secum makes the appendix more difficult to find. Stout people stand manipulation badly. Sometimes the appendix is subserus. When possible operate in the interval between attacks. His technique is not radically different from that of many other men. He advocates going after this organ through au incision in the right rectus muscle about an inch toward the linea alba from the right edge of muscle; the center of the the incision being half an inch below a line drawn from the umbilicus to the anterior superior spine of the ilium. The fibres of the muscle are separated by blunt dissection down to the posterior sheath. The advantages claimed for this route are that the secum aud appendix are easily reached; if necessary to enlarge the opening, it can be done without materially weakening the muscular wall, and the dangers of ventral hernia are decidedly less than by the other routes. This is the so called "Deaver incision." He ties off the meso appendix and the appendix; having disinfected the cut end of the stump he invaginates it, using a purse-string suture and reinforces it by covering the site with the peritoneum. In closing the abdominal wound he sutures the parietal layer of the peritoneum first.

CASE TWO was also an appendectomy with a history of recurrent attacks. The appendix in this case was subserus, and he emphasized how hard it was in some cases to locate it if the serus coat be inflamed and opaque.

CASE THREE: A Hysterectomy for Fibroid.—The uterus was amputated at the cervix, using clamps to facilitate the operation, and the stump was covered by the peritoneum. The appendix was also removed.

CASE FOUR: Cholecystotomy for Calculi.—In regard to this trouble, as on all subjects relating to his profession, Dr. Deaver holds very positive views. He regards biliary calculi as the indirect result of infection of that tract. He emphasized the fact that all attacks of biliary colic were not necessarily due to the passage of calculi, but were in some cases due to spasm of the gall bladder, due to the occlusion of the ducts by inflammation. This had been illustrated many times in irrigating the gall bladder after operation.

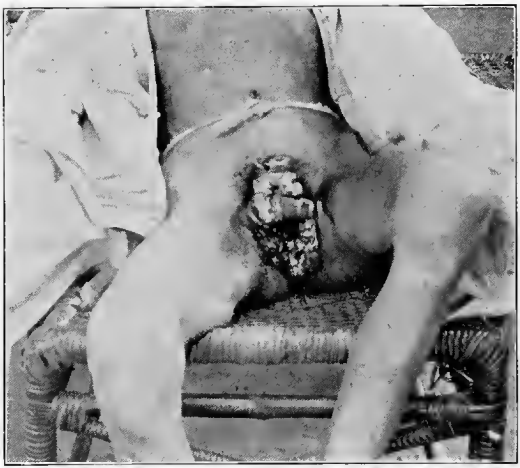
Dr. Deaver does not advocate operation in mild or in first attacks unless the latter are unaffected by treatment after an interval of thirty-six or forty-eight hours. In the former class, or in those that respond promptly to treatment, he advises delay until there are other attacks. He mentions the fact that certain spring waters like Carlsbad, the Virginia Hot Springs, and Bedford Springs, Pa., are curative; but these are for the few who can afford to go. He also points out the duty of the physician in warning the patient against the dangers of impaction and that recurrent attacks of inflammation in this tract often involve adjacent organs, as the stomach and the pancreas.

On opening the gall bladder in this case about half a tea-cup full of calculi were found, and on removing them two more were discovered firmly wedged in the common duct, which were cut down on and removed. A tube was placed in both the duct and the bladder and thorough drainage instituted. Drainage to be complete and maintained for some time. Dr. Deaver also spoke of typhoid fever as a common source of infection of the biliary tract.

CASE FIVE was a disorganized knee joint, probably tubercular, following an old synovitis of six months' duration. Resection with the possible necessity of amputation was proposed; but was refused by the patient, who wished first to consult his family.

CASE SIX was a sub-periostial abscess of the tibia; opened, curetted and packed.

As I sat there and saw case after case brought in and treated, with every aid of modern surgery at hand to increase the chances of a successful result, I could not help thinking of my colleagues in China who, under adverse conditions and in many cases with meager equipment, are doing so much for their fellow-men in that comparatively unbroken field, in the introduction of modern surgery to an effete and sceptical civilization.



SPECIFIC ULCERATION OF GENITALS IN MALE.

SPECIFIC ULCERATION OF GENITALS.

By R. T. Booth, M.B., B.Ch., D.T.M. and H.

The accompanying photograph represents the condition to which a patient's genitals were reduced as the result of prolonged and untreated venereal disease. About nine months before he had come to the hospital suffering from severe ulceration of the glans penis, which had gone so far as to render amputation advisable. The patient, however, refused to submit to such radical measures and went away. Nine months later he returned in the condition depicted in the photograph. The entire penis had ulcerated away and the scrotum had evidently ulcerated in middle line right back to the perineum, ultimately extending to the margin of the anus. The remains of the scrotum, enclosing the testicles, lay as two folds, simulating labia majora, and the whole appearance was not unlike that produced by ulcerating granuloma of the pudenda in a female.

The patient was put under *chloroform* and the testicles removed and the entire ulcerating surface thoroughly scraped with a Volkmann's scoop and then treated with pure *carbolic acid* and alcohol. The patient was put on specific treatment, and is still in hospital, doing well.

He is one of three patients in at the present time suffering in the same way. The second is an elderly man, whose penis had been completely amputated twelve months ago. He had left hospital without permission of the surgeon before the wounds had completely healed, with the result that the ulceration had recommenced in the cicatrice and compelled his return owing to the complete destruction of all the tissue left at time of operation. He is improving under specific treatment.

The Hookworm.—A personal letter from Dr. Ch. Wardell Stiles, dated Atlanta, Ga., November 9th, says :—

"For some months past I have been chasing the festive hookworm through the cotton mills. It may interest you to know that about 50-80 per cent of the question of child labor in the South is a question of Epsom salts and thymol! The typical "cottom mill child" is nothing more or less than a case of hookworm disease who can be turned into a human being very easily, despite the work in the cotton mill."

The above contains sermons for medical missionaries. A few minutes given to examination of the feces in cases of anemia will in nine cases out of ten, in my experience, show the hookworm egg. A few days of diet on soft rice without vegetables, with daily laxative, prepares the way for the thymol and Epsom salts which turn the useless human being into a useful member of society. This is an old story with us here and it should be in many more hospitals in China.—O. T. Logan, Changteh, Hunan.

A CASE OF INFECTION WITH ONE OF THE GORDIACEA.

By J. PRESTON MAXWELL, M.B., B.S., F.R.C.S.

These worms, similar to filiariæ, are rarely found infecting man, and, as far as we know at present, cause no ill effect.

According to Braun, they, in their adult condition, "live free in brooks, pools, and springs; the mouth and the commencement of the intestine are obliterated; there are no lateral ridges, and the muscular system presents a structure different to that of the nematoda. The posterior end of the male is split, and spicules are lacking; there are two testicles. In both sexes the genitals discharge through the terminal gut.

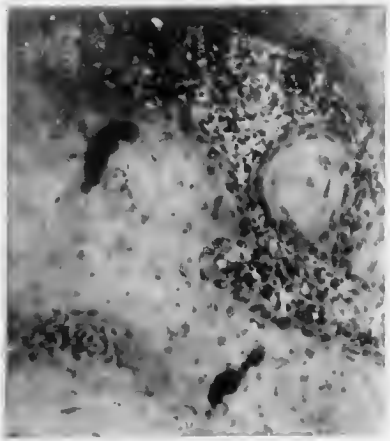
"The larvæ, which carry rostra beset with hooks, force themselves into the larvæ of water insects; more rarely they invade molluscs, and then become encysted within the body of the host. According to Villot, at least a part of them attain the intestine of fishes, where they again become encysted, and after a period of rest, they travel into the tissues of their hosts, and finally again reach the exterior by way of the intestine, where they become adult. In most cases, however, the gordius larvæ are taken up hy predaceous water insects; they live for a while in the body cavity of these insects, undergo a metamorphosis and finally wander into the water.

"A few specimens invade man accidentally with water, in which cases they are generally vomited up."

Two specimens have come into my hands. The first was brought to me coiled around the body of a green grasshopper, and was unfortunately lost while heing transmitted to England. It was almost certainly a specimen of gordius aquaticus.

The second specimen was passed in the stool of a child of twenty months of age. It is brownish in colour, length 13 cm., sex female, and has lost the terminal portion of its body. It was alive when brought to me, exhibiting sluggish vermicular movement.

The child is iu good health and has no bowel trouble at the present time.



A.

B.

C.

KODAKING FOR SMALL GAME.

By W. H. JEFFERYS, Shanghai.

Dr. O T. Logan, that chronic inspiration to good deeds, suggested to me, not long since, that something could he done by hitching a kodak to the proper extremity of a microscope, and I have gone "luny" on the subject. It is great sport and beats bird nesting and tarpon snapping all hollow. I cannot claim any great results as yet, but find all the satisfaction in the world in recording what I do see in this very satisfactory form.

The method is simple. First find the object to be photographed, choose the objective and eye-piece that give the best magnification and clearest definition, then gently turn the cylinder of the scope to the horizontal. For light use a large kerosene lamp reflected by the concave mirror. Place the camera on the same level, with the bellows fully extended, and with the lense practically in contact with the eye-piece, perhaps 2 mm. from it. Then focus on the ground glass, using the fine screw of the microscope to do this. Insert a plate holder and throw a dark cloth over everything except the stage and mirror. The diaphragm of the microscope should cut down all the dazzle, but no more, and the full strength of the condenser should usually be engaged. The stop of the camera should be cut down as for a time exposure. For 1 by 30 the exposure is in the neighborhood of two minutes, for 1 by 200 about five minutes, for 1 by 500 about seven to ten minutes. This if the field is fairly dark and the plates rapid. If it is very bright on the ground glass, that is, if the slide is very transparent, half this time will be enough.

One or two important points. There must he no vibration in the room, no walking or even loud talking. This especially for high powers. The centre only of the field will appear clearly on the negative. The camera stop must be well cut down. Sun light is inconstant and, so far, magnesium ribbon not efficient. If a large camera is used, it should be used with small plates placed centrally. A plate larger than 3 by 3 is wasted.

With diffidence I submit some early results, upon which I trust to greatly improve in the near future.

Plate 1 A. The peculiar tubular form of carcinoma from the case of xeroderma pigmentosa which I reported in the July issue last. It is 1 x 200.

Plate I B. is my first attempt. A very black melanotic sarcoma of the finger. The tumor is shown Plate I C. after amputation of the finger. It was of one year's growth; no glands involved and no recurrence after ten months. It was liver like, oozed black juice, and on section (photo is I by 200) shows sarcoma cells and huge dark brown pigment granules.

PLATE II.

A. Eggs in stool. Ascaris lumbricoides, fertilized. I by 200.

B. ,, ,, ,, ,, ,, unfertilized. I by 200.
This is Dr. Logan's x egg.

C. Eggs in stool of dog. Ascaris canis. I by 200.

D. Eggs in stool. Ascaris lumbricoides, two eggs enclosed in the same outer albuminous covering. They have never separated. I by 500.

E. Egg in stool, opisthorchis sinensis, showing operculum and teat-like protruberance posteriorly. They do not apparently all have this latter. I by 500.

F. Same as E., but I by 200 and showing size comparison with an ascaris egg, the latter a bit out of focus.

G. Egg in stool, ankylostoma duodenale, I by 500, showing eight or ten cell masses in the process of division. The transpareut capsule is dimly seen.

H. Egg in stool, ankylostoma duodenale, I by 200, showing fully formed embryo still in the capsule. This extremely glassy egg should have been stained before photographing.

I, J, and K. These bodies I have found in the stools of two patients: one a Chinese child, I think, the other a foreigu child. The latter had chronic dysentery. I have lost my notes of the former. The pictures are I by 500. The body, which I have not yet identified, is about .04 by .01 mm. in size, and consists of two to six compartments forming an oval; each compartment has a thick clear capsule and a round nuclear body. There is usually projecting from the more pointed end of the oval a neck-like protruberance, and this has either a pair of

Different Forms of J.

1. 2. 3. 4.

N.B.—3 perhaps has the neck broken off.


A.
B.
C.
D.
H.
E.
F.
G.
I.
J.
K.

lips or a slit-like opening communicating by a tube with the upper compartment. Perhaps the lips depend on whether the view is antero-posterior or lateral. As to a horizontal partition, that too may depend on the point of view. In the first case I found one specimen and in the second many. The color is light coffee brown. The neck is sometimes much longer than at others. Once or twice it was absent, or retracted, or broken off. I am working on the thing at present and hope to identify or further describe it at a later time. I do not even feel sure what sort of a "hinsect" this may be. It is certainly some form of intestinal parasite (or bladder). I am inclined to believe it animal and perhaps a gregarinida. (See Braun, pp. 63, 64 and 67). It is always alive and in good preservation, and is an entity. Suggestions on this finding will be gladly welcomed. I shall send specimens to Drs. Stiles and Ward if the thing seems to warrant expert advice. I know nothing of its significance. I. After two weeks' incubation of stool, has 5 cells and neck. K. Neck is perhaps absent, perhaps broken off.

Speaking of advice and opinion with reference to my case "Not Diagnosed," published with the Kaposi case in July, I have received several interesting opinions and am inclined to favor the suggestion "Dermatitis Blastomycotica," made me by Dr. Olsen, U. S. N. I regret to say I have no means of determinating the question at present. Dr. Cochran, Hwai-Yuen, sends the photograph of a case of his own which resembles mine in several particulars, and I think that we shall pretty soon have another opportunity of settling the matter with the microscope. Unfortunately my patient has dropped back into the human ocean of China.

The ovum of opisthorchis sinensis should of course have been included in "The Fecal Chart for China." Several of us are finding it already. I have some 13 specimens of the fluke, removed from the gall bladder. Herewith is a tracing from Braun :—

F 1. 4

Uterine egg and miracidium of opisthorchis sinensis. (After Leuchart.)

REPORT FOR 1907, PATHOLOGICAL LABORATORY, ST. LUKE'S HOSPITAL, SHANGHAI.

The work here reported was done under my personal direction and the several lines of investigation were under way fully six months before the Research Committee of the Association was suggested. I need not therefore apologize for including Dr. Day's fecal report herein. The cases reported were from all sources in the hospital. The work was done simply, but with scientific honesty, and is offered rather as an earnest for the future than for its present value. The equipment is limited and our incubator proved uncontrollable in mid-year. I need not call attention to the incompleteness of bacteriologic diagnoses made from smears alone. The results here, however, may for the most part be trusted, as we are sufficiently well acquainted with these common organisms to spot them on sight.

The urine chart will prove of interest as a general survey of what one may expect to find in Chinese hospital routine. In my surgical wards I have been impressed with the fact that the condition of the kidneys does not play the important part it does in home surgery; the Chinese, including the old, bearing operation well and rarely suffering from post-operative uremia. Also, albumen does not figure in the urine of the old, as with our own people. It seems likely that alcohol is the determining factor.

The fecal findings will be added to during the coming year, and it is hoped to submit a total of 1,000 to the chairman of the research committee. This should give a fair idea of the parasites of Shanghai.

Personally I have played the part of referee, though my chief line of investigation has been in furtherance of a general study of the nosogeography of China, upon which I shall not be ready to report for a year or two. I desire, however, to note the following special findings:—

1. Kaposi's disease, diagnosed in a Chinese, and report with microscopic findings.

2. Clinical report and microscopic findings in a typical and specially perfect specimen of melano-sarcoma of the finger.

3. The failure to incubate the atypical ascaris egg which in the incubator appears to decompose.

4. The findings of the typical egg of ascaris in three cases in which, after repeated doses of powdered *santonin*, and careful inspection, only female worms could be induced to appear, and therefore the suggestion that there is still an unexplained factor in connection with the fertilization of these eggs.

5. The description of an intestinal parasite (see the photographs in this issue of the Journal), which may prove of future interest. I make no particular claims

for this parasite at present, but prefer to describe it before others do so and also to hear whether it has been reported upon before my doing so.

6. Sundry specimens examined for colleagues in China. In this connection I should like to say that I am only too glad, as a member of the Research Committee, to examine and give our collective opinion on specimens entrusted to me by those without laboratory facilities; such findings to be the property of the sender.

I would also add that we have two extra desks in the laboratory and that we shall be happy to welcome to them as our guests any practitioners in the East who feel that a few weeks personal work here, with the clinical material of St. Luke's as a basis, would be profitable. If any desire to take up this offer, they will oblige me by giving notice thereof and fixing the approximate dates in advance.

We have had the pleasure of giving such desk room to the following guests during the past year:—

Dr. Lee, Wusieh.
Dr. Eytinge, U. S. N.
Dr. Scott, Honan.
Dr. McMurtry, Honan.
Dr. Olsen, U. S. N.

WM. H. JEFFERYS, M.D.

A BACTERIOLOGICAL REPORT OF SMEARS FROM 200 CASES OF EXTERNAL OCULAR INFECTIONS IN SHANGHAI, 1907.

BACTERIOLOGICAL FINDINGS.	*Conjunctivitis. Acute.*	*Conjunctivitis. Chronic.*	*Conjunctivitis. Purulent.*	*Conjunctivitis with Corneal Ulcer.*	*Trachoma.*	*Grand Total.*
Koch-Weeks bacillus	41	2	1	...	...	44
Morax Axenfeld diplobacillus	3	17	...	13	1	34
Gonococcus	2	...	7	9	...	18
Pneumococcus	2	...	1	1	...	4
Staphylococcus	4	...	1	2	...	7
Mixed infection: Morax diplobacillus, Staphylococcus	2	1	...	1	...	4
Mixed infection: Morax diplobacillus, Week's bacillus	4	4	...	5	1	14
Mixed infection: Morax diplobacillus, Streptococcus	...	2	...	5	1	8
Mixed infection: Morax diplobacillus, Gonococcus	...	...	1	1	...	2
Mixed infection: Morax diplobacillus, Pneumococcus	...	1	...	1	...	2
Mixed infection: Pneumococcus, Streptococcus	3	...	1	...	...	4
Mixed infection: Pneumococcus, Weeks' bacillus	3	...	1	...	...	4
Mixed infection: Pneumococcus, Staphylococcus	1	...	...	1	1	3
Mixed infection: Weeks' bacillus, Diplococcus (unidentified)	...	2	...	...	2	4
Unidentified diplococcus	2	...	...	...	1	3
Negatives	22	3	...	19	1	45
Total	89	32	13	58	8	200

From the bacteriological findings as tabulated above the followiug conclusions may be drawn :—

Firstly. In the 200 cases, pure infection with Weeks' bacillus was found 44 times, occurring 41 times iu acute conjunctivitis and none in corneal affections. Judging by this evidence it may therefore be concluded that Weeks' bacillus is not prone to attack the cornea.

Secondly. Uuder the columu of chronic conjunctivitis the diplobacillus of Morax and Axenfeld occurred 17 times in pure infections whilst it was found in only three cases of acnte conjunctivitis. It thus appears that the diplobacillus is largely responsible for the chronic form of conjuuctivitis, specially that in which the palpebral conjuctiva is affected. But it is not jnstfiable to warrant the couclusion that this organism is the causative factor of corneal ulcerations, although it was also found in 13 cases of conjuuctivitis with the involvement of the cornea, because no measure was taken to differentiate it from the closely related organism described by Rochat. The latter might have been present in those 13 cases since it bears a great resemblauce in morphology.

Thirdly. Gonococcus seems to play the most prominent part in the etiology of purulent conjunctivitis, and it also appears to be no less virulent than the other pyogenic bacteria in the destructive production of corneal lesions. Of the 58 cases of corneal ulcers it was found in nine in pure infection. It may be safely added that Morax diplobacillus while found generally in cases of subacnte conjnnctivitis, with recurrent corneal ulcers and gonococcus, more often occurred in virulent conjunctivitis with extensive ulceration of the cornea.

As regards the mixed infections and the eight cases of trachoma nothing special is worth mentioning, as the number of cases in which the various types of bacteria were found on the same smear are too few for consideration. In order to deduct absolute couclusions a much larger number of cases should be examined than in the series here presented. In presenting the foregoing conclusions we should be unwarranted in drawing any positive couclusions as to the particular form of ocular affection always dependeut upon a particular type of organism.

We offer the above bacteriological findings and the conclusions drawn from them with the realization that they have value both because they represent, we believe, the first careful study of this question made on Chinese soil and at least serve to identify certain well-known micro-organisms as pathogenic in China.

E. Sinded Tyau, M.D.

A Report of the Microscopic Findings of 400 Specimens of Urine in St. Luke's Hospital, Shanghai, 1907.

Non-organized Sediments.

	Uric Acid Crystals.	Am. Urates.	Sod. Urates.	Hippuric Acid.	Calcium Oxalate.	Calc. Phosphate.	Calc. Carbonate.	Calc. Sulphate.	Ammonio-magnesium Phosphate.	Basic Magnesium Phosphate.	Amorphous Phosphate.	Leucin.	Tyrosin.	Cystin.	Cholesterin.	Xanthin.	Hematoidin.	Indigo.
Syphilis...	2	2	8	1	24	...	1	...	11	...	1	...	1	...	...	...	...	...
Traumatism ...	5	2	12	...	21	4	...	1	12	...	...	1	1	...	...	...	...	...
Tuberculosis ...	4	1	5	1	2	...	...	...	5	...	2	...	...	...	...	...	...	...
Pleurisy...	2	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Malignant Tumors ...	2	...	1	...	1	...	...	...	2	...	...	...	...	...	...	...	...	...
Pneumonia ...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Beri beri ...	1	1	1	...	...	...	...	1	2	...	1	...	...	...	...	...	...	...
Hepatic Disorders ...	...	...	1	1	1	...	...	...	...	1	2	2	1	...	...	...	...	...
Renal Diseases ...	...	...	5	...	1	...	...	...	3	...	...	...	...	...	...	...	...	...
Non-specific Fevers...	2	...	22	...	5	...	...	...	6	...	1	...	...	...	...	...	...	...
Malaria...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Abdominal Operations ...	2	1	2	...	1	...	...	...	2	...	1	...	...	...	...	...	...	...
Cystic and Urethral Diseases	...	1	...	...	2	...	...	...	3	...	...	...	...	...	...	...	...	...
Ascites and Edema ...	...	...	5	...	3	...	...	...	2	...	...	...	...	...	...	...	...	...
Nervous Diseases ...	2	...	3	...	3	1	...	...	2	...	...	...	...	...	...	...	...	...
Gangrene and Necrosis ...	1	1	2	...	4	...	...	...	3	...	...	...	...	...	...	...	...	...
Minor Ailments ...	11	1	6	...	22	...	...	...	10	...	3	...	1	...	...	...	...	...
Health ...	1	1	1	...	15	...	...	...	3	1	4	1	...	...	...	...	...	...
Total ...	35	11	81	3	105	5	1	2	66	2	15	4	4	...	...	...	...	...

Organized Sediments.

	Epithelial Cells. Urethral Cystic.	Epithelial Cells. Renal.	Blood Corpuscles.	Tube Casts. Epithelial.	Tube Casts. Hyaline.	Tube Casts. Granular.	Spermatozoa.	Fat.	Fibrin and Cylindroids.	Fungi.	Pus and Mucous Cells.	Trachomonas.	Tubercle Bacilli.	Gonococci.	Negatives.	Number of Cases.
Syphilis...	21	...	2	...	2	1	3	...	3	1	24	2	...	...	4	68
Traumatism ...	23	1	...	...	...	2	...	...	...	1	12	1	...	...	14	79
Tuberculosis ...	2	...	...	...	...	1	...	...	1	...	5	...	1	...	2	19
Pleurisy...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	4
Malignant Tumors ...	2	...	...	...	1	...	...	...	1	...	2	...	...	...	...	6
Pneumonia ...	1	4	...	...	2	2	...	...	2	...	4	...	...	...	...	7
Beri beri ...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	6
Hepatic Disorders ...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	6
Renal Diseases ...	...	2	...	1	1	3	...	...	1	...	2	...	...	...	...	7
Non-specific Fevers...	5	...	...	...	...	1	...	...	...	...	3	...	...	...	2	25
Malaria...	4	...	...	...	...	...	...	...	...	...	2	...	...	...	...	7
Abdominal Operations ...	1	...	1	...	...	...	...	...	...	...	1	...	...	...	1	8
Cystic and Urethral Diseases	2	...	3	...	...	...	...	...	...	...	6	1	...	1	...	10
Ascites and Edema ...	...	1	...	...	...	2	...	...	...	...	1	...	...	...	1	7
Nervous Diseases ...	1	...	...	...	...	...	...	...	...	...	3	...	...	...	...	5
Gangrene and Necrosis ...	3	...	...	...	...	...	...	...	2	1	1	...	...	...	2	13
Minor Ailments ...	18	1	...	...	1	1	...	...	2	2	9	...	...	...	14	81
Health ...	23	1	...	...	...	...	1	...	4	1	3	...	...	...	7	43
Total ...	107	10	6	1	7	13	4	...	18	6	79	4	1	1	48	400

From the table we note that in the 400 specimens of urine, calcium oxalate has occurred 105 times; squamous epithelium of urethral and cystic origins, 107; sodium urate, 81; pus and mucous corpuscles, 79, and ammonio-magnesium phosphate, 66. Consequently we may infer that these five are the commonest ingredients of uriuary sediments in Shanghai.

The crystals of calcium oxalate varied in form and shape; the most common variety being the octahedral. According to our observations calcium oxalate is generally found together with squamous epithelial cells, which leads us to suggest that the exfoliation of the latter may be more or less due to the mechanical action of the octahedral crystals of the former.

Not infrequently we found that the alkaline phosphates and the acid crystals were contemporaneously present in the same specimen. This may be attributed to the feebleness of the acidity, or, as Tyson describes, to the presence of carbonic acid or acid phosphate of sodium.

As to the parasites in urine we have seen trachomonas vaginalis four times. They were found alive and swimming with their characteristic jerky motion. It seems that they have not shown any clinical significance.

We found that renal elements were more or less associated with cases of pneumonia that had come to us and been under our treatment. Every case had some renal cells, or tube-casts, or both. However, we hesitate to make a general statement, as our findings are those of a very limited number of cases.

In 25 cases of non-specific fevers sodium urate was present in 22 cases, and in seven cases of pneumonia three had the urates, as had also three cases of malaria. From this we may infer that sodium urate is one of the chief constituent of the sedimeuts of fever urines.

Under the microscope we sometimes met with difficulty in distinguishing the amorphous urates from the amorphous phosphates. To facilitate their recoguition, we often resorted to some simple chemical tests, e. g., moderate heat dissolves the urates and a drop of acid clears up the phosphates.

C. U. YUI, M.D.

LABORATORY REPORT OF THE MICROSCOPIC EXAMINATION OF FECES FOR 1907.

In presenting this report we purposely limit our study to the finding of ova in the stools, in order to show with exactitude the amount of infection, with animal parasites, of the people of this part of China.

During the year 500 stools, mostly of the surgical ward patients of St. Luke's Hospital, were systematically examined, irrespective of symptoms presented. Out of this number, however, the findings of the first fifty are excluded for the sake of greater accuracy, thus our observation only covers a series of 450 stools.

Dr. Olsen's report on fifty stools examined was printed in the *Journal of the American Medical Association* for March 2nd, 1907. These were also cases from St. Luke's wards, and the examinations were made in the laboratory.

The following is the result of our findings in tabulated form:—

INFECTION WITH ANIMAL PARASITES IN 450 STOOLS EXAMINED.

	Single Infection.	Mixed Infection.	Total Cases of Infection.	Percent.
Ascaris lumbricoides	151	96	247	54.8
Tricocephalus dispar (trichiuris)	22	89	111	24.6
Ankylostoma duodenale	4	21	25	5.5
Opisthorchis sinensis	2	...	2	.4
Fasciola hepatica	...	2	2	.4
Strongyloides intestinalis	...	1	1	.2
Oxyuris vermicularis	1	...	1	.2
Cases with positive findings	...	...	275	61.1

INFECTION WITH ANIMAL PARASITES IN 500 STOOLS (INCLUDING DR. OLSEN'S 50).

NAME.	Our cases of Total Infection.	Dr. Olsen's cases of Total Infection.	Grand Total.	Per cent.
Ascaris lumbricoides	247	26	273	54.6
Tricocephalus dispar (trichiuris)...	111	9	120	24.
Ankylostoma duodenale	25	2	27	5.4
Opisthorchis sinensis	2	...	2	.4
Fasciola hepatica	2	...	2	.4
Oxyuris vermicularis	1	1	2	.4
Strongyloides intestinalis	1	...	1	.2
Cases with positive findings	275	30	305	61.

ELI DAY, M.D.

Reports of Customs Surgeons.

HEALTH OF NEWCHWANG FOR THE YEAR MAY, 1904, TO MAY, 1905.

During the year in which I held the temporary appointment of Customs doctor for the port of Newchwang, I am glad to report that the health of the foreign community there has been remarkably good. One resident died suddenly at Shanghai, where he had gone on business. There were two additions to the community by birth. There has been no epidemic of plague, small-pox, cholera, or other infectious disease, with the exception of a mild form of influenza, which went round nearly every one. It was remarkable principally for the severe neuralgias which accompanied it in several cases. An American correspondent who had been staying in Newchwang for some weeks, was accidentally shot dead while trying to get to Port Arthur on board a native junk. His body was brought to Newchwang. At the post mortem examination it was found that the bullet had penetrated the brain at the back of the head, smashing the bone into a great many pieces. Among the Customs staff one case of severe dysentery occurred. After three weeks in hospital he was discharged cured. Washing out the large intestine by means of a rubber catheter, with a strong solution of *permanganate of potash* along with *ipecacuanha* internally did good. Among the shipping community there was one severe case of typhoid fever in a young engineer, who eventually succumbed. One case of small-pox was removed from a British steamer, which came from Shaughai, to the infectious diseases hospital established by the Japanese administration. The patient was a Greek, and had contracted the disease where it had been raging for some time before the steamer left. After being in hospital about three weeks he was discharged cured. Several cases of death from charcoal fumes, on board ship, occurred. In one ship three men, Chinese stewards, shut themselves into a small four-berth cabin with a charcoal fire and went to sleep and were found dead the next morning. On another ship one man died in a similar way. Three employees of the Chinese Imperial Railway at Yingkow station were also poisoned in this way, but two of them recovered, after getting them into fresh air and applying stimulation.

As the war was seen to be coming nearer our doors, a Red Cross and Refugee Aid Society was formed in Newchwang in connection with the

central society in Shaughai. Neither belligereut, however, needed our help for their owu wounded, so our work was restricted to the care of Chinese wouuded. The missionary doctors iu the province placed their hospitals at the disposal of the Society, who supplied them liberally with surgical dressings, anti-septics and other hospital requisites. Our Newchwang hospital received and treated about thirty cases. Two native junks were blown up by mines in the Gulf of Pechili and the survivors were picked up, in one case by another junk, in the other by a steamer, and brought to Newchwang. Three of these men were treated in the Red Cross Hospital for slight wounds all over the body, caused by the explosion; oue of the three, however, had his eyesight permanently injured. A number of children and young men were treated for injuries of fingers and hands, often ueeding amputatiou, due to the explosion of shell fuse which they had picked up and were carelessly examiuing. Several cases of bullet wounds were also treated after the battle of Ta-shih-chiao, which place is distant about sixteen miles from Newchwaug. The Chinese iu that battle did not suffer very much. After the battle of Liaoyang, Dr. Westwater had over 300 Chinese wounded and Dr. Christie in Moukden had over 200.

At the time of Mistcheuko's raid on Newchwang a carter found himself between the belligerents. Wishing to get away quietly, he yoked his horses in the dead of night and proceeded on his way. The Japanese guard, hearing the noise of the approaching cart and thinking it was a movement of the Russians, fired, killing one or two horses aud wounding the carter. The bullet entered to the outside of the anterior superior spine of the ileum, scoring deeply the bone for three inches and then passed out. After an operatiou, in which a good many loose pieces of bone were removed and good drainage established, the wound healed up. As the Red Cross hospital at Newchwang did not have many wounded, it acted as a distributing centre for the other Red Cross hospitals up country.

Amongst my ordinary Chinese patients in the missiou hospital at Newchwang there was an interestiug case of bullet wound of the abdomen. The patient, a young lad, had been accidentally shot by a pistol. My colleague, Dr. Gordon, who was helpiug me for a few months at that time, opened the abdomen the next day, but could find no injury of the intestines. The bullet was found lying loose in the bottom of the pelvis and was removed. The lad made a good recovery. A case of popliteal aneurism was also operated upon by him. The sac was exposed and opened aud the artery tied above its entrance to the sac. The whole limb was wrapped iu cotton wool and slightly elevated.

After a day or two, however, gangrene commenced to set in owing to the cutting of the main blood supply to the leg, so it had to be amputated above the knee. Although the man was about fifty years old he eventually made a good recovery, and with the aid of a wooden stump and crutches he was able to get about.

In Manchuria the largest proportion of our surgical cases are due to tuberculosis. The number of diseased glands of the neck and armpit from this cause is enormous. Women especially suffer from this disease. I believe the overcrowding and want of ventilation of their dwellings during the night is largely to blame for this state of things. Four to eight adults often sleep in a small room with windows and doors closed. A little knowledge of the good qualities of fresh air and cleanliness of the person would do much to get rid of this terrible scourge. Latterly I have been having three or four operations a week from this cause alone. During the year several cases of excision of the elbow joint, for tubercular disease, have done well, also a case of amputation of the thigh in a woman, for advanced tubercular disease of the knee. Several amputations of the leg were performed on cases of railway accident.

Two other cases I would like to record, although they happened a few days after the year closed. A young man was operated on for ununited fracture of the thigh and amputation of the thigh was performed. The shock of the operation, however, was very great and we were afraid he would not pull through. The heart beat was over 150 per minute and the pulse at the wrist could not be felt. Dr. Daly gave a saline injection of about seventy ounces into the loose tissues of the flanks. This undoubtedly saved his life. Injections of *strichnine* and the raising of the foot of the bed about sixteen inches, so that the blood gravitated towards the heart also helped to pull him through the critical period. He is now making a good recovery. A case of tumour of the leg, of which I append a photograph, was also successfully removed. The tumour weighed nearly seventeen pounds and had been growing for over two years.

The statistics for the Newchwang hospital for last year are as follows :—

In-patients, 385 ; operations, 288 ; dispensary new cases, 6,194 ; returns for medicine, 4,515 ; daily dressings (including those in hospital), 19,010 ; cases of opium poisoning, 30.

I also append a table of the average temperature and rainfall for the year, for which I am indebted to Mr. Benson, Harbour Master at Newchwang.

T. L. BRANDER, M.D.

TUMOR OF LEG—NEWCHWANG HOSPITAL.

AVERAGE TEMPERATURE AND RAINFALL AT NEWCHWANG.

1906.	RAINFALL.						1906.	TEMPERATURE.					
May	1.75	inches.	11	days.	33 55	hours.	May	79	max.	43	min.	59.6	mean.
June	4.81	,,	10	,,	47.30	,,	June	89	,,	52	,,	71.8	,,
July	4.31	,,	7	,,	36.55	,,	July	93	,,	60	,,	76.09	,,
August	10 01	,,	13	,,	76.00	,,	August	92	,,	62	,,	76.04	,,
September	.75	,,	4	,,	5.30	,,	September	85	,,	40	,,	66.5	,,
October	1.19	,,	5	,,	19.50	,,	October	73	,,	30	,,	48.8	,,
November	.08	,,	1	,,	2.00	,,	November	59	,,	16	,,	37.2	,,
December	.09	,,	1	,,	2.00	,,	December	48	,,	1	,,	21.4	,,
January '07.	.13	,,	2	,,	12.20	,,	January '07.	44	,,	2	,,	24.1	,,
February	.05	,,	1	,,	8.00	,,	February	36	,,	3.5	,,	17.1	,,
March	.23	,,	3	,,	40.00	,,	March	56	,,	1.1	,,	32.3	,,
April	1.17	,,	4	,,	23.00	,,	April	65	,,	2.7	,,	45.1	,,

IN EXPLANATION.

To the Editor, CHINA MEDICAL JOURNAL.

DEAR DOCTOR: I have been informed that the paragraph relating to "venereal diseases," in my Customs medical report, September 30th, 1906, page 328 in the November number of the JOURNAL, was objectionable, and that I was wrong in making this assertion. I have been requested by the Consuls and the Captains concerned to rectify this in the next issue of the JOURNAL, and I do so by asking you to kindly publish the following :—

(1). Every sailor destined for this port is subjected, before his departure from Shanghai, to a complete medical examination, and must be free from disease before being allowed to come here. They could therefore import no disease.

(2). The men are subjected on board to periodical medical visits, and should any one be found with venereal disease, he is prevented from leaving the ship until cured. Therefore, if contracted in Chungkiug, he would not be able to propagate the disease.

I am, yours, etc.,

J. H. MCCARTNEY,

Customs Medical Officer, Chungking.

THE NEW ENGCHHUN HOSPITAL, ENGCHHUN, FUHKIEN PROVINCE, SOUTH CHINA.

Buildings in China, especially in mission service, where every penny has to be carefully considered, are erected with an eye to utility rather than appearance.

The new hospital at Engchhun is no exception to this rule. As will be seen by reference to the photo, the hospital consists of four large double-storied blocks connected together by bridges, with a large double storied gatehouse and several blocks of subsidiary buildings.

To go round the hospital in detail, let us commence at the main entrance. The gatehouse is a two-storied building, the central portion forming a covered porch below which, when complete, will be fitted up with seats for patients. The inner wall of this porch carries the main hospital door, and the large room over the porch and gateway forms the main store for hospital bedding.

On either side of the gateway there is a single room below and a siugle room ahove. On the left as one enters, is the room of the porter on duty, with its wicket for the distribution of tickets on out-patient days. Above this room is the head porter's room, entered by an outside wooden stair.

On the right as one enters, is the large chair house for sedan chairs. Above it, and also approached by an outside stair, is a room divided into two by a partition, which serves as bedrooms for two hospital porters. The hospital has four porters, each of whom in turn comes on duty for a week, during which time he may not leave the hospital and must be ready to do any thing the doctor or his assistant requre.

Coming inside the gateway one is confronted with two paths. The one leads straight on to the inner gate of the hospital, past the site of a small mortnary to be built as soon as funds permit. Entering this inner gateway one walks straight to the foot of the stone staircase of the secoud block, having the hospital lavatories, destructor, and pig stye on the right immediately on entering. Further on the right, after a small court, come the wash house, isolation, venereal, and leper wards, and further on, beyond these, the kitchen, rice and oil store, wood room, well house for kitchen well, and a rice pounding room not yet completed.

The bedrooms of the two cooks are also included in this group of buildings, all one-storied and mostly old or recoustructed.

NEW ENGCHUN HOSPITAL.

Front View, showing Gate House, Blocks 1, 2, 3, and tip of 4 (behind). Doctor's residence to left.

To return to the gateway, over the portal of which one notes two inscriptions in Chinese character. The upper one reads :—

"JESUS HOLY CHURCH HEALING HALL."

The lower, which is a very fine specimen of the moulder's art, reads :

"GOD IS LOVE."

Taking now the path to one's left, one notes the large outer block and immediately arrives at the doors of the hospital chapel. Over the two doorways which form the entrance to the chapel (one for men, the other for women) is the inscription in Chinese character :—

"CHRIST CAME INTO THE WORLD TO SAVE SINNERS"

and high up in the centre of the end of the building, above the first floor windows, is a circle with the figures 1906 in the centre and the Chinese characters for "GLORY TO GOD" grouped around this medallion.

Entering one of the large doorways below, one finds oueself in the chapel. Down the centre runs the moveable partition which divides the men from the women. At the further end is the platform with over it the motto in Chinese :—

"PREACH THE GOSPEL, HEAL THE SICK."

To the left of the platform is a dais with a baby organ, kindly presented to the doctor for the use of the hospital. On the walls are bright Scripture pictures, and as one turns one finds facing the platform a fine memorial tablet, remembering one to whose memory the outer or administrative block and the women's block are erected. This tablet is in dark bluish granite with sunk gilt letters, the lower half iu Chinese character and also including the text John iii. 16. Above this tablet is a clock, kindly presented to the hospital, and forming the official hospital timekeeper.

Passing up the chapel one is confronted with two doors : one to the right, the other to the left. The one to the right leads into a vestibule, whicb is also provided with a door from the outside, and serves as a waiting room for patients who come on other than out-patient days.

The left hand door leads directly into the hospital assistant's room. A passage leads down the centre of this block, and on either side are a set of rooms. To the left there are the hospital assistant's room, a drug store, and the dispensary. On the right are the main staircase with a fine dark room for ophthalmic work, built in below and

further out ; the office of the student on duty, an examination room for patients, and the Doctor's consulting room. The last three rooms are connected by doors.

Mounting to the upper floor one finds over the chapel a students' room, shut off from the rest of the block by double spring screen doors. The windows are all netted with wire mosquito netting, so that there is no need for any nets in connection with the beds.

To the right of the central passage above is the students' bath-room and lavatory, a small kitchen for making tea, etc., for the after-operation ward which adjoins it, Beyond this again is a large scientific work room. On the left is the students' dining room, a small store room, the sterilizing room, and a fine operating theatre.

Passing now either out of the lower passage, or along the bridge at the end of the upper passage, one enters the second block. With the exception of the hospital preacher's room, the whole of this block is divided into wards of two, four, or six beds respectively. Two of the wards of two beds are supported respectively by friends at Solihull and Bromley. Of the two-bed wards, three are for hire by private patients.

Of the remaining wards—three—containing fourteen beds in all, are fitted up for the initial stages of the cure of opium smoking. The windows are barred and mosquito proof, and the doors are fitted with locks and bolts. Those coming for cure go into these locked up rooms for the first week and are not allowed to leave them during that time. They are then transferred for the remainder of their cure to one of the other wards in this block.

One also notices a stand of buckets of sand ready in case of fire and a long ladder hung in the upper storey ready for use in case of emergency.

Passing on now to block three :—This is a large block of four wards; two below and two above, named Faith, Hope, Charity, and Peace, and accommodating forty-eight patients. The south side of the block is protected by a verandah, and in front of this verandah on the ground floor is a large covered area fitted up with a stone table, a large case for dressings, a large irrigator, and in due time to be fitted with stone seats. This place is used for the dressing of chronic ulcers, of which one has to treat a large number.

Still passing on one comes to a gateway in a wall which divides off the fourth block from the other three blocks. Above, the bridge between blocks three and four is similarly closed by a door, which is kept strictly locked. Entering either of these doorways one finds one-self in front of a big square block containing two large wards, one

NEW ENGCHHUN HOSPITAL.
The Administrative Block from the Northeast.

above and one below; four small wards, a small operating theatre, a storeroom, matron's room, and lavatory.

This is the women's block, and behind it towards the north is a small set of old buildings, including the main women's lavatory, a small kitchen, an isolation ward, and a wash house with its own well. These latter rooms are not fitted up as yet, owing to lack of funds. The main wash house of the hospital, noted before, contains also its own well and boilers.

Feeding the patients, as the hospital does, always means that there is a certain amount of waste. This is obviated and turned into a source of profit by the keeping of pigs, and under proper control and management there is no objection to this arrangement on the score of cleanliness.

Besides the buildings which have been already described, in the grounds of the doctor's house there are storehouses for wood, oil, lime, spirit, glass, and paint, hardware, a carpenter's shop, and stables for the doctor's horses and the hospital horse, which is used by the assistant and students when going to see cases outside the hospital. Most of these things have to be bought in bulk and brought up the river, if one wants to run the hospital on an economic basis. Glass for instance has to be bought on the spot.

The doctor's study is connected with the administrative block by telephone, and the consulting room with various parts of the buildings by means of electric bells.

On the south side of block one is a water tower to be finished at some future date. A well has already been sunk to serve this tower, and it is hoped that in the future it may be possible to erect a proper water plant with pipes running all over the buildings. Connected with this water tower is a flagstaff, which on out-patient days flies a Red Cross flag.

It must be borne in mind that the hospital is as yet unfinished. Drains are as yet not properly laid and grounds are yet in disorder.

One point may be noted about the drainage system. There is not a covered drain in the place, and in all the building care had been taken to avoid leaving any place which might serve as a harbourage for rats. With plague all round, this is an item of great importance.

Then the roofs of three of the blocks are made of wood covered with patent roofing. This enables them to be made with only a slight pitch, and putting aside the fact that it is cheaper than tiles, it has the advantage that it can be easily looked over and repaired in case of need without calling in workmen from the outside.

As to the accommodation. The provision is as follows:—

Male.—102 beds, *including:* Opium, 16 in the lock up wards; lepers, 6; venereal and isolation, 6.
Female.—28 beds, *including:* Venereal and isolation, 3.
There are also two beds in a special post-operation ward.
Total number of beds, 132.

As to the possibilities of the hospital, perhaps it would be well to say a word. The building has been opened some six and a half months, and in that time there have been:

In-patients, 600.
Operations, mostly serious, 300.
Visits paid outside the hospital, 200.

Unfortunately the staff is shorthanded at present and the supply of suitable students is insufficient. But it is hoped that ere long this deficiency may be made up.

THE OPENING OF ST. JAMES' HOSPITAL, ANKING.

The formal opening of this hospital took place October 23rd, 1907. It has been under construction for nearly two years, and although described in the JOURNAL for September, a brief recapitulation may not be amiss.

The hospital is built of blue brick, with heavy trimmings of red brick and granite, relieving the otherwise sombre effect of the blue. In style it is a modified Gothic, not embodying Chinese features. Its shape is that of the letter E., facing south with arms projecting northwards and is three stories in height in the two long arms where the slope of the land made the addition of basements necessary. These long arms contain each three wards for men and women respectively; the women's wards having one-half the capacity of the men's. The short central arm, one storey in height with basement, contains the aseptic operating room and adjoins the sterilizing and anæsthetizing rooms and recovery ward on the lower floor of the central arm of the E. This arm is administrative, and contains on the lower floor, besides the aseptic operating suite, chapel, drug and store rooms, minor operating rooms and offices, and on the upper floor laboratories and private rooms. The men's and women's departments are separated by partition walls in the corridors above and below in this arm. The capacity of the hospital is one hundred beds.

ST. JAMES HOSPITAL, ANKING, CHINA, REAR VIEW.

Residences of Foreign Staff at left. Residences of Chinese Staff and Dispensaries are on the right. All foreground is hospital property.

In front of the hospital is the dispensary building, in which the entire separation of men and women is carried out, with special rooms for medical and surgical cases and central drug room.

The opening exercises extended over three days. On the first, H. E. Teng Hsü, Governor of Anhwei, the representative of Viceroy Tuan Fang, with over forty of the highest officials of the province, were present. On arriving they were received at one of the foreign residences, and after a short interval were conducted by Dr. Woodward to the main entrance of the men's hospital. There the company paused, and after prayer by the hospital chaplain, the Rev. E. J. Lee, Dr. Woodward handed a box containing a silver key to the Governor and asked him to open the hospital for the reception of patients.

The guests were then shown over the hospital and were much interested in the very complete appointments, major and minor operating rooms, running hot and cold water, foreign bath tubs and electric bells. After a full inspection they were ushered into the large men's surgical ward, which had been profusely decorated with flags and chrysanthemums and where they were entertained at luncheon prepared by the ladies of the station.

This over, Dr. F. L. Hawks Pott, of Shanghai, acted as Chairman and gave an address of welcome on behalf of the mission. He then introduced the special representative of Viceroy Tuan Fang, by whom he had sent a special message, which was read and translated. It spoke in high terms of the work being done by medical missionaries throughout China and ended with the request that those in charge of the new hospital do all in their power to help the government rid the Chinese people of the opium curse.

The Governor's address was then read. In it he spoke with appreciation of the suffering relieved by the old St. James' Hospital. This was followed by H. B. M. Consul, W. P. Ker, of Nanking, who read greetings from Sir John Jordan, British Minister at Peking, and from Sir Robert Hart. The latter enclosed his cheque for one thousand taels "to show his sympathy with what is being done both for body and soul."

Captain Andrews, of the U. S. S. *Villalobos*, then read messages from the American Legation and the American Consul at Nanking and spoke in earnest commendation of medical missions. He was followed by Dr. George A. Stuart, of Nanking, President of the C. M. M. A., who emphasized the educational value of such hospitals and dwelt on the brotherhood of man and the fatherhood of God, as manifested in His son, the Divine Physician.

This brought the speaking to a close, and the exercises of the first day were ended with the presentation by the Governor of certificates to Drs. Yong and Hung, who have assisted in the hospital during the past six years and completed in English a course in the theory and practice of medicine.

On the second day about one hundred of the prominent gentry, scholars and merchants of the city were similarly entertained.

The third day was set apart for the Christians. It began in the morning with a communion service in the hospital chapel for the first time. In the afteruoon the Christians of the China Inland Mission and those of our own were entertained and a special service held in the men's ward, which was filled to overflowing.

The first patients were admitted to the wards Monday, October 28th, 1907.

OPENING OF THE BAPTIST HOSPITAL AT YANGCHOW.

The Yangchow Baptist Hospital was formally opened on Friday, November 29th. When the dispensary was opened, two and a half years ago, there was such a large attendance that it was thought wise to have two services this time. So we invited the Christians in the city to a morning service and the officials and other outside friends for 3 p.m. The morning hour was not very convenient, yet a large number of friends attended, representing all the churches in the city, and Dr. Macklin representing the Nanking friends. There had been so many delays in finishing the building that the time for opening could not be settled till a few days before the event, so there was not time to invite friends from any distance.

The main address of the morning was made by Mr. Chü, pastor of the Methodist Church of this city. Rev. L. W. Pierce, Dr. W. E. Macklin, Rev. A. Y. Napier, Dr. Y. L. Sz, aud Dr. Evans also took part.

After the service Chinese tea and cakes were served in the dispensary guest rooms, which were decorated with chrysanthemums. There were no printed programs, but the hymns to be sung were priuted on sheets of red paper and handed to each guest.

The afternoon guests were separated. The officials, about sixteen in number, were received in the parlor of Dr. Evans's house, where tea

BAPTIST MISSION HOSPITAL, YANGCHOW, 1907

YANGCHOW OFFICIAL AT HOSPITAL OPENING, NOVEMBER 29, 1907.

and cake were served in foreign fashion. The other guests were received in the dispensary guest room, where they received foreign cake and tea in the regular Chinese way.

After refreshments the officials were escorted through the hospital, followed by the other guests; and then all went into the chapel for a service somewhat like that of the morning, but more general in character. We sang once and had a short reading from the Bible, but nothing to correspond to the dedicatory prayer of the morning. The hospital had been opened and dedicated in the morning by the Christians. The afternoon meeting was more of a reception given to allow them to examine the hospital.

The main address was by Mr. Mar, a teacher in one of the foreign-style schools of the city. Dr. Macklin, Mr. Pierce, Dr. A. S. Taylor and Mr. Wu spoke. Mr. P. C. Kwoh, a Christian English-speaking Chinaman, who is in charge of the I. P. O., spoke on behalf of the officials.

Every one seemed much pleased with the new buildings and with the way the "Opening" passed off. The day was pleasant, and the only thing regretted was the shortness of time, which prevented our inviting many friends who had expressed their interest in the work.

Our medical work here is situated on a main cross road a short distance inside the South Gate, in a part of the city that is rather thinly settled, giving lots of sunshine and fresh air, yet very convenient to the centre of the city. The residence of the first foreign doctor was finished in March, 1904, and regular work for Chinese out-patients begun in December of that year,—three years ago. The dispensary opening being delayed till the chapel was completed in April. The contract for this first hospital building was signed December 21st, 1905, nearly two years ago. This long delay is due largely to the time needed to make or buy the furnishings, many of which are still to be gotten.

The chapel is 35 by 25 ft. The dispensary, one end of which has an upper storey, is 68 by 24 ft. The hospital is 65 ft. long, including an 8 ft. verandah on the west end. The east end is 37½ ft. wide, and the west end 27½ ft., including a balcony 2½ ft. wide all along the south side. This verandah is a slight departure from the generally accepted style. The advantage of this arrangement is that you have the sun coming into the rooms, particularly the wards, during the cold months, while it does not even touch the walls in the summer months.

The operating room, 14 by 16, is on the N. E. corner, upstairs, having a sky light 7 by 7, with the adjoining room, 12 x 14, for sterilizer, dressing, etc. There are two wards, 22 x 22, much smaller than first

planned, because of the increase in price of material and poor exchange. There are two rooms for private patients and the regular rooms for office, assistant, linen, bath rooms, etc. The kitchen, servauts' room, store-room, laundry, etc., are all separate, being built against the north wall of compound to get good southern exposure.

The hospital staff now consists of two foreign physicians—A. S. Taylor, M.D., P. S. Evans, Jr., M.D.—Y. L. Sz, a graduate of Dr. Park's hospital in Soochow, and four pupil assistants, with other regular help. There have been a good many applicauts for the hospital. So far two have come. The dispensary clinic runs along about twenty-five to thirty.

It has only been possible to go to out-calls since a trained assistant was secured. He now carries on most of the routiue dispensary work. The out-calls average nearly one a day. Just yesterday oue of the out-call patients, wife of the Viceroy Chou Fu, said she was going to send five hundred taels for the hospital. We hope this is a promise that the work can be self-supportiug before long.

We need a ward for women, and hope to soou need another for men. The present building was planned with the idea of having other wards beside those in the building. There is room both on the east and west for wards built like the present oue, running east and west. Then we have recently purchased about 140 "fang" of land just opposite the gate, where we hope to have a house for the first assistaut.

The pictures show what the building looks like and the officials (all but one or two) who came that day. The prefect and one of the magistrates are among the number.

We feel that now it ought to be possible to do a good deal to help on the cause of the Master here. This district has always had the name of being very hard territory for mission work. We are hoping that the medical work may be the means of helping change this condition.

The China Medical Journal.

VOL. XXII. MARCH, 1908. NO. 2.

The yearly subscription to the China Medical Missionary Association is $4 Mex., payable in January of each year. This includes the JOURNAL and postage on the same, whether local or foreign.

All changes of address, departures on and arrivals from furlough should be notified to the Secretary and to the Presbyterian Press. Members are requested to invite new comers to join the Association.

The Editors will be obliged if all those who are building hospitals will send copy of plans and detailed description (in duplicate if possible). These will be loaned, on application, to members who are proposing to build.

Resolution passed by the Medical and Centenary Conferences.

IV.—Whereas, It is of the highest importance that the medical missionary should have a good knowledge of the Chinese language, spoken and written, and should early gain some experience of existing mission methods; *Resolved*:—To emphasize the advisability of relieving him of all reponsible work during his first two years in the country, of requiring him to pass examinations not less searching, if on different lines, than those of his clerical colleagues, and of locating him for a time in an established medical centre.

Editorial.

THE FECAL INVESTIGATION.

We desire to call the special attention of the Association to the fact that the first installment of Fecal Reports is now due. It is hoped that a second series will at once be taken up, but for the convenience of the chairman of the Research Committee, who has the job of tabulation, it is asked that the first series, large or small, be now sent in. They may be sent either to the editorial office, or care of either of the Editors, or direct to the Chairman, Dr. JAMES L. MAXWELL, Jun., 31 Hammelton Road, Bromley, Kent, England.

Dr. Maxwell is leaving almost immediately for furlough and will gladly give part of his leisure time to this compilation. We trust that the Central China Branch, whatever they may do with regard to their special investigation plans, will add their whole findings to those of the Association at large.

We repeat that the blanks may be had at any time and in any quantity from the Editors. As far as returns are in, it appears that already some points of extreme interest have developed, and there is every reason to believe that a contribution of real value is to be assured to the credit of those taking part in this investigation.

BUYING IN JAPAN.

This issue contains an advertisement that will prove of interest to many of us who have realized that the Japanese market is cheaper for some hospital supplies and prompter for many than the home market. Almost monthly we have received letters asking for information on the subject and we have supplied it according to our own experience. We have for years past bought all our Japanese goods through the St. Luke's Pharmacy Hospital Supply Department, St. Luke's Hospital, Tsukiji, Tokyo.

"Some time ago this Hospital Supply Department of St. Luke's Pharmacy was opened. The management was led to take this step hy the belief that there are many foreign physicians in China, the Philippines, and throughout the East who are desirous of huying their hospital supplies in Japan, but are deterred from doing so, because they find it difficult and often unsatisfactory to deal directly with the Japanese manufacturer. From the time of its inception the results of the undertaking have been so satisfactory that it is now determined to develop this department more fully, to which end a catalogue has been compiled for distribution."

The manager, Dr. R. B. Teusler, is personally known to us, and being a heart and soul missionary, his interest in supplying the best and the cheapest is guaranteed.

With regard to how to buy in Japan, we would say that we have ourselves given up as hopeless, trying to deal at long distance with Japanese firms. We may not understand their methods, but they have done to us repeatedly what we are accustomed to call tricks. Their ways are not our ways. We deal through this agency which knows them, and at any rate is on the spot to see what is what. We do not buy cutting instruments of any kind. They do not cut. But *absorbent gauze*, *iodoform*, and *iodine*, all kinds of instruments that are not supposed to cut, hospital and operating room furniture, and laboratory supplies can be bought in Japan safely and with considerable saving of cost. Cotton, of Japanese make, is cheap, but is so put up that it does not go as far as home cotton, and therefore no money is saved. It is not so dainty either. This has been our experience in the matter, and we heartily recommend the market for the above mentioned goods. The agency is altogether satisfactory aud reliable.

PRELIMINARY ANNOUNCEMENT, INTERNATIONAL CONGRESS ON TUBERCULOSIS.*

Washington, D. C., September 21 to October 12, 1908.

"The section work of the congress will be done in the week September 28 to October 3. During that week there will be two general meetings. During the three weeks September 21 to October 12 a tuberculosis exhibition will be open, and a course of special lectures by distinguished men will be in progress. Clinics and demonstrations of unusual interest will be arranged for the whole period.

"The exhibition will assemble illustrative materials from all parts of the civilized world. Members of the congress will find many opportunities to acquire or to increase, by exchange or otherwise, a valuable collection of illustrative objects. Literature forms an important part of many exhibits, and much of this literature can be had on the spot, for the asking, or will be sent, on written request, to any address.

"The committee has decided to award testimonials to especially meritorious exhibits. These testimonials will take the form of medals, diplomas, or money prizes. A cash prize of $1,000 is offered for the best evidence of effective work in the prevention or relief of tuberculosis done by any voluntary association since the last International Congress in 1905. A cash prize of $1,000 is offered for the best exhibit of a sanatorium for the treatment of tuberculosis among the working classes. This must be a detailed exhibit, covering construction, equipment, and management. A cash prize of $1,000 is offered for the best exhibit of a furnished home for the poor in the interest of the crusade against tuberculosis. Several prizes of smaller value will be offered for educational leaflets. These prizes are designed to produce new educational literature.

"A medal is offered for the best exhibit illustrating effective organization of the anti-tuberculosis campaign in any state of the United States. A medal is offered for the best exhibit sent by any state or country (United States excluded), illustrating effective organization for the restriction of tuberculosis. More detailed advice concerning the awards will be published later, or will be furnished on application to the Secretary-General.

* Printed by special request of the Committee.

"The papers announced in the official program will be printed in advance, and will be distributed on the day of their presentation. They will be printed in German, French, Spanish and English. The proceedings of the congress will be carefully edited and will be published within three months after adjournment. The section proceedings, with the special lectures, the discussions, and an account of the exhibition, will make four substantial volumes, about 2,000 pages.

"The distinguished medalist, Mr. Victor D. Brenner, has been commissioned to design and execute a commemorative medal, which will be used as the badge of membership and as the artistic motif in the awards to exhibitors.

"There are two classes of members: Active members pay a fee of five dollars, and they receive, besides the ordinary privileges of membership, the full set of published transactions without extra charge. Associate members pay a fee of two dollars. They do not receive the published transactions, nor vote in the congress. They receive the official badge, the printed matter distributed during the congress and at the exhibition; they share in the entertainments, attend the meetings, clinics, demonstrations, etc., and have the benefit of special transportation and hotel rates."

ASSOCIATION NOTES.

New Members of the C. M. M. A.

Joined through the China Medical Journal:

C. E. Blair, M.B., Ch. B., Edinburgh, London Mission, Tingchiu, Fukieu.

Louisa Graham Thacker, M.B., B.S., London, English Pres., Chinchew, Amoy.

J. Herbert Sanders, M.D., M.R.C.S., L.R.C.P., Unattached. The Matilda Hospital, Hongkong.

Agnes M. Livingstone-Learmonth, M.B., Ch.B., Ed., Pres. Ch. of Ireland, Hsin-min-t'un, Manchuria.

Robert Grierson, Dalhousie Univ. Med. Faculty, Halifax, Can., Canadian Presbyterian, Song Chin (Joshin), Korea.

Walter W. Williams, M.D., Washington Uuiv., M. E. Mission, Ing-an, Fukien.

Mabel Pantin, L. S. A., Ch. of Eng. Zenana, Dong-kau, Ping-nang.
H. Stanley Jenkins, M.D., London, F.R.C.S., Eng., English Baptist, Sianfu, Shensi.
E. Margaret Phillips, B. Sc., M.B., Ch.B., Manch., S. P. G., Ping-yin, Shantung.
A. L. Shelton, M.D., Kentucky Univ., Foreign C. M., Ta-chien-lu, Sze.
H. C. Patrick, M.B., C.M., Glasgow, Private Practice, Shanghai.
W. T. Clark, M.D., Western Univ., London, Ont., Can., C. I. M., Tali Fu.
Albert Penard Laycock, M.B., Ch.B., Cantab., M.R.C.S., L.R.C.P., C. I. M., Kaifeng.

NOTES.

Dr. Marcus Mackenzie writes that the C. M. S. are starting a medical school at Foochow. They hope to build this year and open the school late in the autumn. Dr. Sangster and Dr. Wilkinson will also be on the staff and the pupils will be taught in Mandarin. Dr. Mackenzie says: "We are convinced that the time has come to give a more thorough and scientific training to medical students. I have given up my work in Funingfu hospital, and the special sphere occupied by our Dublin University Mission, and the University Mission has permitted me to devote my energies to this new scheme."

It is surely most appropriate that the Dublin University Mission should take up this very urgently needed work. We shall follow its development with our prayers and sympathy, and trust that financial and language difficulties may be satisfactorily overcome, and that the other two Foochow missions may see their way to join in and put the school on a good union basis.

A German medical school was commenced in Shanghai last October. Until the new buildings are erected the work is carried on in two large rented houses. At present a beginning has been made in the preliminary scientific work and in the teaching of the German language. There are eight students in the scientific course and twenty in the German. It is hoped that as the various schools for teaching the German language throughout China are developed the need for this preliminary class will gradually disappear. The

enterprise is well supported and is being undertaken with characteristic thoroughness. The present members of the teaching staff are Profs. Du Bois Reymond, Ammann, and Schlingler.

His Excellency Viceroy Tuan Fang has marked his appreciation of the work by sending a number of students to take up their studies with a view to the formation of an efficient Army Medical Corps.

Our best wishes go with the enterprise. The medical needs of China are so great that all present efforts to supply them are very inadequate.

The Hongkong and China Branch of the British Medical Association has resumed its meetings. On January 23rd Dr. Stedman read a paper on "Notes on a Case of Obliterative Arteritis," Dr. Koch one on "Leprosy, Some Problems;" and clinical cases were shown. All members of the B. M. A. resident in China belong to this branch.

We notice with interest the formation of the Han Valley Medical Missionary Society; the members being Drs. Sjöquist, Hotvedt, and Robert Anderson. We hope to be able presently to welcome this as the youngest and smallest branch of the C. M. M. A.; our three brethren are certainly to be commended for their enterprise. It is an example that should surely be followed by many districts where there is a much larger number of medicals.

How is it that the term 醫生 is so universally used by foreign medicos in China? In a fairly prolonged residence in the country the writer has never heard it used by the people untouched by foreign influence, nor has he met anyone who has. In recent Chinese literature it is used for third rate medical men and in Japan it means a medical student. 醫士 or 醫師 is of course the correct designation; the former being the one of most general application and the best to use, and we should see that it is used of us and by us.

"I am threatening—in my mind—to write a little skit for the JOURNAL on *Castor Oil!* There is so much about rare work and

refined work, that I am feeling like sending a little about just common work. Have had some fine results in dysentery, typhoid and so on with it as the 'main thing,' and so want to give the 'old reliable' (*castor oil*) its dues!"

Pour it in. Just what we want, *pace* the Editor!

"One of the most noted December events of the Soochow community was the celebration of Dr. Park's fiftieth birthday. His house was filled all day with the rich and noble of the city, and but for the bad weather the crowd of visitors would have been even larger than it was. Congratulations were showered upon the physician, who has been for twenty-five years so successful in the treatment of all kinds of disease. A "loving cup" was presented by the twenty-six doctors of medicine who took their medical course in his hospital. There were also presents of large and beautiful vases and bowls and of silken scrolls with appreciative mottoes. Not among the least of gifts was one of $1,700 to supply the hospital wards with artesian water. The University cadets marched in by companies and representatives of girls' schools were present to sing songs of congratulation specially prepared for the occasion."—*N.-C. D. N.*

HOW THE SOCIETY MAY AID RESEARCH AND PROMOTE THE ADVANCEMENT OF THE SCIENCE OF MEDICINE IN CHINA.*

After speaking of the immense amount of clinical material passing through the hands of the able men in the Coast Ports of China and in Formosa, the writer asks that these physicians be brought to such an efficient state of organization that

(*a*). The geographical distribution of the common and uncommon diseases of Eastern Asia may be more effectively determined.

(*b*). The causes of various common diseases may be made the subject of systematic research.

(*c*). The intestinal parasite may be hunted on his native heath and his toxicity determined if possible.

The writer goes on to say that there are many in China who, though overworked along all lines, and in spite of isolation, are doing splendid research work. He urges that these men be organ-

* Abstract of a paper by J. Herbert Sanders, M.D., Medical Superintendent of Matilda Hospital, Hongkong, read at the annual meeting of the Hongkong Branch of the British Medical Association.

ized, and that all organizations get into communication through the CHINA MEDICAL JOURNAL (of which he speaks very highly more than once) so that the work of all may count for the common good.

"It is the duty of every doctor to keep himself abreast of the times by the study of books, to devote himself fully to every case of illness that is brought before him, and to apply to all doubtful cases the full extent of the microscopic and bacteriological tests which are in his power."

"Scientific work is a part of our daily occupation, and if we all try and help elucidate some of these mysteries that still surround us, by reporting the diseases we come across, especially rare ones, and the lines of treatment we have found to give good results, we shall then be doing service and helping forward the cause of medicine."

The writer closes by saying: "I do not think it would be advisable to start anything in the way of a medical paper, but we might get in touch with the Editors of the CHINA MEDICAL JOURNAL, Shanghai. Their idea of devoting a part of their paper to extracts from the current medical literature, is an excellent one."

BRANCHES OF THE C. M. M. A.

Central China Branch: Secretary, Dr. J. G. CORMACK, Hankow.
Manchurian Branch: Secretary, Dr. W. PHILLIPS, Newchwang.
Korean Branch: Secretary, Dr. H. H. WEIR, Chemulpo, Korea.
Shanghai Branch: Secretary, Dr. A.W. TUCKER, St. Luke's Hosp.
Kuling Branch: Secretary, Dr. W. ARTHUR TATCHELL, Hankow.

Extract from Constitution of C. M. M. A.

Article V. *Local Branches* of this Association may be formed by any three active members, provided the Constitution of such Branches is in full harmony with the Constitution and By-Laws of this Association. All members elected to Local Branches shall be *ipso facto* members of the parent Association. The election of new members to these Branches shall be duly reported to the Association Secretary, and an annual statement of their progress and membership shall be forwarded to him for publication in the JOURNAL.

Resolution by the Committee on Reference and Counsel representing the Boards of Foreign Missions of the United States and Canada.

"The Publication Committee of the C. M. M. A. having made an appeal for an annual subscription from Mission Boards in Great Britain and the United States and Canada, for three years, to enable the Committee to arrange for the translation and publication of suitable medical text-books, the Committee on Reference and Counsel cordially commends the application to the favorable consideration of the various Boards in the United States and Canada having Missions in China."

SUBSCRIPTIONS TO THE PUBLICATION COMMITTEE FUND.

Dr. E. Leonard ...	...$14.00
,, Briton Corlies ...	... 10.00
C. P. B. Jefferys, Esq., Philadelphia	... 21.50
Dr. Sanger	... 20.00
,, Douglas Gray ...	... 10.00
"Cockney"	...133 33
Drs. F. F. and E. P. Tucker.	25.00
William's Hospital, Pangchuang, per Dr. Tucker ...	25.00
Margaret Elizabeth Nast Hospital, per Dr. Betow ...	10.00
Mr. Ho, per Dr. Cousland ...	20.00
Dr. E. McKillop Young ...	40.00
,, J. L. Keeler	20.00
,, J. D. Mitchell	5.00
,, F. W. Goddard, per, ...	10.00
,, H. Vortisch	10.00
Forward,	$373.83

Mrs. W. McClure, Honan, gold	$100.00
Per Dr. J. B. Neal :—	
Miss Waller ...	50.00
,, Shipley ...	5.00
,, Chalfant	25.00
Mrs. Jas. Boyd	100.00
	$280.00=616.05
Prof. Kenny, M.D.	£20
J. W. Ballantyne, M.D.	5
Sir A. R. Simpson, M.D.	2
Edin. Med. Miss. Soc	15
	£42=461.83
Wesleyan Miss. Soc.	£20=219.26
Church Miss. Soc.	£10=102.00
	$1,772.97

As the accounts for the past year are not yet to hand from the Press, they and the Reports of Publication and Nomenclature Committes must be held over till the next number.

There is little progress to report as to publications. The only thing one can be sure of in getting books out is delay, so much so that it is better not to indulge in forecasts! Reference to the advertisement page will show what books are on sale. Dr. Ingram hopes that Vol. II of the Therapeutics will be

ready by June. As Vol. II of the Gynecology is larger than was expected, the price of the 2 Vols. will be $2.

A correspondent who is teaching physiology sends some criticisms and corrections on the part he has been going over. He very unnecessarily apologises for so doing! We are only too delighted to receive them. If teachers will only keep a notebook beside them and jot down the page and column in which they find any phrase or character that wants changing, or if they will mark the text-books themselves and send them in, we shall be charmed to receive them. If funds allowed we would offer a prize for the largest list of suggestions and corrections! There is no need to be bashful about it. We are all wading into the same slough, hoping to find firm ground later on.

P. B. C.

Book Review.

Merck's 1907 Index (Third edition).

An encyclopedia for the chemist, pharmacist, and physician, stating the names and synonyms, source or origin, chemical nature and formulas, physical form, appearance and properties, melting and boiling points, solubilities, specific gravities and methods of testing, physiological effects, therapeutic uses, modes of administration and application, ordinary and maximum doses, incompatibles, antidotes, special cautions, hints on keeping and handling, etc., of the chemicals and drugs used in chemistry, medicine, and the arts. 472 pages. Bound in cloth. Primarily, Merck's 1907 Index is published for distribution in the United States, but, owing to numerous requests, a number of copies have been set aside for sale in other English-speaking countries. So long as these reserved copies last, the publishers, Merck & Co., University Place, New York, U. S. A., will send the book to any chemist, physician, or wholesale druggist, upon receipt of three shillings and six-pence, or eighty-five cents

The general scope and character of this book are made sufficiently plain in the sub-title. It is a Chemical Encyclopedia. But, whereas Beilstein takes in all possible chemical combinations, Merck's 1907 Index limits itself to the chemicals and drugs actually on the market, giving in regard to them information comparable to Beilstein's.

To those who have had previous editions, Merck's Index has become almost indispensable. This latest editiou is bound to make many new friends, improved as it is by the addition of the newest products of the chemical industry, by the adoptiou of the latest nomenclature and by the adherence to the most modern authorities

Report of Local Branches.

KOREA BRANCH.

A local meeting of the Korea Medical Missionary Association was held in Seoul, November 29th, at the home of Dr. J. W. Hirst. Six members were present, and Dr. W. B. Scranton was made chairman.

It was voted to hold monthly meetings; that each member, in turn, act as chairman and that the next meeting be held January 14th, at Dr. Scranton's office, with Dr. Weir as chairman.

Dr. Emma Ernsberger then read a most interesting and helpful paper:—"The best methods of carrying on the evangelistic work in hospitals with especial reference to following up old in-patients." The practical suggestions made both in the paper and during its discussion resulted in assigning to Dr. Hirst the duty of presenting, at the next meetiug, a suitable blank "form" which can be filled in by the physician or hospital assistant and mailed to the evangelistic worker living nearest the home of the patient in question with a request to search for him (or her) and look after his or her spiritual needs.

The Seoul branch of the Korea Medical Missionary Association held its second meeting in Dr. Scranton's office, January 14th. Seven doctors and two trained nurses were present; Dr. H. H. Weir in the chair. The paper—"Registration"—by Dr. Hirst, was considered and illustrated under these four headings:—

1. Obtaining and presenting such information concerning our patients as to enable us to treat them most efficiently.

2. Securing necessary statistics for knowing and reporting the state of our work.

3 Securing such information as to enable us to follow up possible converts and refer them to the evangelistic worker in their locality.

4. Securing records for scientific study and observation.

Discussion was free, but though general was chiefly centered ou the "form" to be filled and seut evanglists. A few desirable additions were suggested to the excellent sample Dr. Weir had presented the author of the paper. Dr. Avison was appointed to perfect the "form" and have a supply printed.

The next meeting is to be at same place on February 11th. Dr. Hirst, chairman. Paper on "Medical Education," by Dr. Scranton.

MARY M. CUTLER,

Editor for Korea Branch M. M. A.

CENTRAL CHINA BRANCH.

The Secretary's Report of the C. C. M. M. A. was adopted by the Association at its meeting ou December 11th, 1907.

The following were elected office-bearers for next year:—

President, Dr. J. MACWILLIE.
Vice-President, Dr. R. T. BOOTH.
Treasurer, Dr. BRETTHAUER.
Secretary, Dr. J. G. CORMACK.

A syllabus for next year has been drawn up, and, when completed, will be duly forwarded to the JOURNAL. Central China still means to keep the ball rolling.

C. C. M. M. A. Report for 1907.

Another year of tbe Association's life has come and gone, and we naturally look back and ask ourselves how far the Association is still fulfilling the aim of its existence.

1907 bas been shadowed by the greatest loss the Association has met since its foundation, in the removal by death of its loved president, Dr. S. R. Hodge. Loving tributes bave been paid to his high Christian character, and without doubt his presence is missed at every meeting. We long to look upon his face again; meantime the memory of the higb ideal he had as a medical man and a Christian, is a continual inspiration to us.

The year just closed has been most fruitful in keeping us alert to the scientific side of our work. Arising out of our first meeting, a committee on research was formed, and this has been at work gathering information on the subject of "Fæces." At a later meeting, a paper on "The Training of Nurses," by Mrs Rowley, led to the formation of a committee to draw up a course of stndy and scheme of examination for nurses. The report of that committee was accepted, and the C. C. M. M. A. will yearly appoint examiners and grant diplomas to the Chinese nurses who pass tbe prescribed examination.

In all thirteen meetings have been beld; the last one being the 133rd since tbe Association began.

The papers read before the Association were fewer than in former years, but up to the average in point of interest. Tbe cliuical meetings especially bave afforded valuable opportunities in diagnosis of difficult cases, and much help has been gaiued in that way, while the scieutific miud has been stimulated as the cases have been discussed. Provisional diagnosis has sometimes been verified by after treatment and operation; but, also, we have been shown our fallability aud mistakes.

Among the cases and specimens shown during the year the following seem worth mentioning:—

CASES.

Liver abscess.
Fracture of clavicle from disease.
Progressive muscular atrophy.
Polio myelitis ant. (2 cases.)
Very large nasal polypi. (2 cases.)
Lateral Patellar dislocation. (2 cases.)
Nævus of Upper Lip.
Ectasia Sclera.
Tub. disease of cuneiform bones of foot.
Hygroma of neck.
Lupus.
Ankylosis of Lower Limb and Right Arm.
Fibrous Ankylosis of Jaw.
Tumour of Abdominal Wall.

SPECIMENS.

Ovarian tumours (2 very large and 1 small).
Cancer of breast from a man.
Colloid cancer.
Sarcoma of jaw.
Sarcoma of breast.
Malignant tumour of abdominal wall which had been simple for twenty years.
Elephantiasis of scrotum, weight six pounds.
A four months' fœtus.
Single specimen of fæces containing the following:—
Ascaris lumb
Ankylostomum duodenalis.
Tricocephalus dispar.
Schiztomia Japonicum.

The fraternal interchange of opinion is a great deal to us all and unites us as nothing else would, in keeping before us the dignity and importance of our profession. We are glad to note too that our Association has acted as a stimulus to other places to form branches.

Perhaps the day is not far distant when fully qualified Chinese doctors will be regular members of our Association and share with us the benefits such an Associaton coufers.

J. G. CORMACK,
Sec. C. C. M. M. A.

Report of Sub-committee re Examination of Nurses.

1. Examination in all cases to be in two parts, written and practical.

2. That the examination paper for both male and female nurses should include :—

(*a*). General Ethics of nursing (e .g., Introduction Nursing Book).
(*b*). Elementary anatomy and physiology.
(*c*). General nursing.
(*d*). Medical ,,
(*e*) Surgical ,,
(*f*). Nursing of Infectious diseases.
(*g*). ,, ,, Eye cases.
(*h*). Diet and special invalid foods.

That in the oral part of the examination women nurses shall be, in addition, examined in gynæcological and monthly nursing and nursing of children.

3 That a separate examination with a special certificate attached, be given in the following subjects :—

a. Women nurses : Obstetrics.
b. Male nurses : First aid and ambulance.

4. That the course for the Nursing Certificate should be three years, and that it may not be taken till the candidate is twenty years of age (English reckoning).

5. That examinations for special certificates cannot be taken till at least six months after the passing of the General Nursing Examination. Certificates not to be granted till the candidate can produce evidence of having attended not less than twenty cases in connection with a hospital, and of having had three full years of nursing training. Certificates not to be granted till candidates are twenty years of age.

6. That the nursing examination may be taken any time after the close of the second year, but certificates not to be given till the end of the third year. In order to obtain a certificate, a satisfactory report of general work and conduct must first be obtained, signed by the hospital authorities.

7. That examinations should take place twice in each year—in April and October. Candidates who have failed may enter for the next examination.

8. That while not limiting either teachers or candidates in the use of text-books, should the candidate give an answer in accordance with the Association's book of nursing, that answer must be accepted by the examiner.

9. That every candidate, before presenting himself or herself for examination, must produce a certificate signed by the authorities of the hospital where the candidate has been taught, stating :—

(*a*). That he or she has had two full years' training as a nurse.
(*b*) That he or she has regularly attended classes for instruction.
(*c*). That he or she has given satisfaction in both practical and theoretical work and in general behaviour.

10. That a Board of Examiners, numbering not less than three, shall be appointed at each annual meeting of the Association, and that in addition, two others shall be appointed to act as substitutes in case of any of the three being unable to act. Any hospital sending in candidates for examination shall be allowed to send one of its teachers to act as referee during the examination.

Medical and Surgical Progress.

Internal Medicine.

Under the charge of EDWARD H. HUME, M.D.

THE TREATMENT OF TUBERCULOSIS.

The subject of the therapeutics of tuberculosis is so vast and the contributions so numerous that one might easily have a department in the JOURNAL exclusively given up to it. The prevalence of the disease in China, and the difficulties we meet in its treatment, under the ordinary conditions of Chinese home life, would seem to justify the frequent giving of space to this topic. During the past year many articles have appeared which give hope to those who were coming under the spell of the therapeutic nihilists. While drugs must always play but a minor part in the real effecting of cures in tuberculosis, there *are* some that have definitely been shown to give results. Of these, as well as of certain recent appliances for the treatment of tuberculosis, mention will be made in the following review. For the sake of brevity, only pulmonary tuberculosis will be here considered.

1. *Artificial Hyperemia of the Lungs.*—Foremost among the methods of treating tuberculosis by other methods than the use of drugs must be mentioned the method elaborated by Staff-Surgeon E. Kuhn, of Berlin (*Deutsch Med. Woch.*, 1906, No. 37, also a later article in *Folia Therapeutica*, 1907, page 108). The fundamental observation of Rokitansky that in cases of heart disease accompanied by pulmonary congestion evidences of tuberculosis were rarely found in the lungs was the basis upon which Bier built up the whole of the modern treatment by hyperemia that bears his name. In kyphosis also, where the tuberculous mischief is in the spinal column, there is seldom developed pulmonary tuberculosis owing to the congestion that almost invariably occurs. On the other hand, in cases of pulmonary stenosis, patients almost invariably die of pulmonary tuberculosis contributed to by anemia of the lungs. Experimental work has shown that caseation of tuberculous nodules is favored by anemia of the lung tissue, and that the formation of scar tissue proceeds more rapidly if there be a plethora of blood in the lungs. Attempts at producing artificial hyperemia were made long ago. Elevation of the extremities and lowering of the upper part of the body fails because of its tendency to produce hemorrhage. Bandaging of the extremities has been rejected because of the general diminution in the blood mass which follows long continuance of this treatment. A third way, i.e., by opposing a resistance to inspiration, has repeatedly had practical tests, beginning in 1835, when Ramadge of London, having observed that asthmatics and others who inspired with difficulty, on account of tumors in the neck or from other cause, very rarely developed tuberculosis, caused his patients to breathe through a special apparatus with a narrow mouthpiece, and had remarkable results. Kuhn has found that a condition of pure hyperemia can only be obtained by inspiration against resistance, expiration remaining unimpeded; any impediment to expiration is to be avoided in subjects of pulmonary tuber-

culosis owing to the danger of inducing acute emphysema. In a strictly rational method the inspired air must be moistened and warmed. Dr. Kuhn's *pulmonary suction mask* meets these conditions. It consists of a light celluloid mask fitting over the mouth and nose, divided by a cross partition providing a chamber each for the nose and mouth. In both, free expiration is permitted by means of expiratory valves in each chamber, while inspiration can only occur through an adjustable slit in the nasal chamber. The use of the mask for about an hour twice daily has been proved sufficient for all therapeutic purposes, and as patients usually take kindly to the treatment, it is more often necessary to persuade them to discontinue too vigorous use than to urge its continuance. The benefits following use of the mask may be thus summarized :—

1. A pre-eminently costal type of respiration is at once enforced, thus gradually widening the chest, especially in its upper part. 2. Emphysema cannot occur because of the brake put upon diaphragmatic breathing. 3. The lungs are, as a matter of fact, kept in a condition of rest, for while the mask is being worn, the room for dilatation at the disposal of the lungs is less than with free unimpeded inspiration. 4. Each breath increases the intensity of the passive hyperemia in the lungs, for, as during the respiratory cycle inspiration is prolonged at the expense of expiration, the amount of blood drawn into the lungs during inspiration cannot be completely returned before the occurrence of the next inspiration. 5. The entire respiratory musculature is strengthened 6. Danger from hemorrhage is absent; as theoretically proved and practically tested, the hyperemia being the result of suction on the vessels from without and not of increased pressure from within. 7. The heart is strengthened, not only by better circulation through it, but it is disburdened of work by increase of the physiological action of the inspiratory mechanism upon the pulmonary circulation. 8. A considerable increase occurs in the number of red and white corpuscles in the blood and also in the hemoglobin.

Objectively one notes improvement of respiration, diminution in its frequency, cessation of cough, disappearance of bacilli from the expectoration and increased appetite, in addition to the general improvement in condition due to circulatory strengthening. The mask, it is stated, may be obtained in London through Messrs. Maw, Son and Thompson.

2. *Opsonic Therapy.* — Soutre (*Brit. Med. Journal*, 1907, i, 1417) fears that in tuberculin, even when regulated by the opsonic index, we have not the cure for tuberculosis of the lungs. But Jeans and Sellards, (*Johns Hopkins Hospital Bull.*, 1907, xviii., 232) reporting a study of nine patients treated with tuberculin prepared by themselves, the treatment being checked by observation of the tuberculo-opsonic indices, conclude that the continuation of this method of treatment is justifiable. In no case was the result miraculous (the series included surgical as well as pulmonary tuberculosis), but there seemed to be a definite relation between the treatment and the improvement of the patient. Hygienic measures are insisted upon, in addition to the tuberculin treatment. Sir A. Wright continues his labors, and many believe with him that we have in this method a foresight of the rational treatment of the future.

3. *Diet.*—Dr. H. R. M. Landis (*Progressive Medicine*, December, 1907) feels that *diet*, if not *the* most important factor in treating pulmonary tuberculosis, certainly merits as much attention as climate, exercise or medication. He gives the following essential points in the dietary management of the consumptive patient :—The ingestion of foods capable of producing an increase in weight; milk and eggs are more nearly ideal for this pur-

pose than any other food. Specific directions should be given as to the amount and the time the food is to he taken. Above everything else do not tell the patient to eat all he cau, and in addition take as much milk and as mauy eggs as possible. The amount of food should he arbitrarily fixed, hut should vary with each patient. If three quarts of milk and six eggs lead to a disordered digestion, the amount should be kept just helow the point which will cause such disturbances. The amount of forced feeding should depend on the extent of the disease and the amount of weight lost. Early cases with slight loss of weight, as a rule, will do well ou three meals a day with very little forcing. Cases in which the disease is moderately or far advanced and in which there is great loss of weight should have the diet forced to a point compatible with good digestion. Dr. Landis prefers one full meal in the middle of the day and the use of milk and eggs for the rest of the dietary. Clapp (*Med. Record*, 1907, June 29) advocates three meals a day, at two of which meat is given, and in addition, two and a half to three quarts of milk and six raw eggs. He gives the milk and eggs at breakfast and supper and at lunches (10 a.m. 4, 9 p.m.) Arneill (*Jour. of the A. M. A.*, 1907, July 6) states that the dangers of forced feeding are over-emphasized; the two greatest of these heing bilious or auto intoxication attacks and pathological obesity. These ordinary cases of indigestion in the consumptive can he successfully treated along symptomatic lines. Edsall (*Bost. Med. and Surg. Journal*, 1906, clv, 26) calls attention to the fact that fats are badly borne hy certain classes of patients; among them not a few phthisical cases. They could not take milk, cream or eggs without distress, and sometimes vomited them; but they could, without trouble, take skimmed milk and the whites of eggs, showing that the fat was the disturbing factor. The question may he raised in China, whether objection to milk dietaries that one constantly meets with is really due to fat-intolerance or to habit.

4. *Medication (a). The Use of Amyl Nitrite.*—A large number of papers have appeared calling attention to the important place *amyl nitrite* should have in the treatment of hemoptysis. The treatment has been spoken of as Francis H. Ree's (*Lancet*, Novemher, 1906, and January and April, 1907). At first it appears to he madness to give a patient with a bleeding vessel a drug which is a powerful vasodilator, but even though its action be only transient, it produces such an immediate fall in the geueral hlood pressure that the pressure at the bleeding point is lowered, and there is time for clotting to take place, and the hemoptysis usually ceases almost instantly. *Amyl nitrite* causes no reactionary pulmonary hyperemia, while *adrenalin* apparently does, and the former has the further advantage that it does not interfere with coughiug, and so places no ohstacle iu the way of the patient getting rid of the effused hlood. Hence it lessens the risk of later septic trouble. Crace-Calvert (*Lancet*, clxxii, 4362) uses the drug in 3-minim capsules, one of which the patient breaks, inhaling the fumes as they rise. Warning should he given that the consequent feeling of fullness in the head is of no significance. *No case of phthisis should be allowed to be without an immediately available supply of amyl nitrite for inhalation.* The efficacy of this drug led Otis (*Bost. Med. and Surg. Journal*, 1907, clvii, 211) to test the action of *ergot*, especially in cases of low blood pressure or when

recurrent and continued slow bleeding seemed to indicate a passive rather than an active hemorrhage. The average blood-pressure being determined to be about 126 mm. of mercury for tuberculous patients, his report is based upon cases in which the pressure had fallen to between 109 and 119, having fallen from higher level before hemorrhage. He concludes: "If the blood pressure be high, use the nitrites, but if low, ergotin subcutaneously. I am quite well aware that when I suggest the use of ergot I am uttering heretical doctrine, but in our experience it has apparently proved itself of value in at least a few cases where other remedies have failed."

(*b*). *Intratracheal Treatment.*—Mendel (*Rev. Therap.*, 1907, lxxiv, 5, quoted in the *Amer. Jour. of the Med. Sci.*, 1907, cxxxiv, 297) is very enthusiastic regarding the treatment of pulmonary tuberculosis by means of intratracheal injections of from 1 to 10 per cent. *gomenol* or *eucalyptol* in oil. Of 200 patients in all stages of the disease, selected at random and treated by this method, 47 per cent. of apparent cures are reported, 33 per cent. of improvement, and 20 per ceut. of failures, the latter being individuals in the late stages of the disease. The treatment must be continued for a considerable period of time.

(*c*). *Creosote.*—While condemned by many, *creosote* has never before had so many enthusiatic supporters as at present. Bouchet (quoted in *Progressive Med.*, 1907, December, 281) recommends that it should be given in capsules, on a full stomach, with powdered charcoal as a diluent. Landis (loc. cit.) advises as follows: For each drop of *creosote* there should be a tablespoonful of hot water. The *creosote* should be thoroughly emulsified by actively stirring with a spoon for at least five minutes. As the larger doses are reached, 15 to 20 drops, the amount of water need not exceed a tumblerful. The dose should be given 15 to 20 minutes before meals, and prepared in this way, as much as 20 drops can be given three times daily for weeks or months. The claim that *creosote* has an injurious effect on the kidneys is not supported by clinical experieuce. It may also be administered hypodermically, dissolved in sterilized oil 5 to 10 per cent., or per rectum (*Folia Therapeutica*, 1907, i, 111). It may be used as a cutaneous inunction, as in the *unguentum creosoti*, or it may be administered by intratracheal injection, 10 to 50 per cent. (dissolved in oil). Instead of *creosote*, *guaiacol* or *guaiacol carbonate* (duotal) may be used.

(*d*). *Potassium Iodide Contra-indicated.*—Landis (*Progressive Med.*, 1907, December, 303) considers it conclusively demonstrated that the administration of *potassium iodide* to a tuberculous case is a dangerous procedure. In one instance a woman with a suspected apical lesion was given the drug in 5-grain doses every three hours in order to obtain some sputum. She had no symptoms of tuberculosis and the signs at the right apex were indefinite. On the third day her temperature rose abruptly, cough developed and an abundaut expectoration containing tubercle bacilli was obtained. Fever of a hectic type continued up to the time she left the hospital three weeks later. The diagnostic use of the drug has been advocated, but there is no doubt that it is capable of arousing a latent lesion to undue activity.

Gynecology and Obstetrics.

Conducted by KATE C. WOODHULL, M.D.

VENTRAL FIXATION OF THE UTERUS.

This subject is fully considered by Dr. R. H. Ingalls in *Journal of Obstetrics*, May, 1907. He believes that ventral fixation is an undesirable operation, except in cases in which the ovaries have been removed or the woman has passed the period of child bearing. He objects to all forms of ventral suspension with these exceptions. Three cases are narrated, in the first of which the paturient uterus ruptured posterially. The fœtus was dead. A supravaginal hysterectomy was performed, the patient recovering. In the second case there was a partial rupture of the posterior uterine wall. A Cæsarian section was performed, the patient also recovering. In the third case a dead child was extracted after a very difficult labor by podalic version. In all three cases the attachment of the uterus to the abdominal wall had remained firm, and was separated at the time of operation with great difficulty. The uterus had developed during pregnancy entirely along its posterior aspect, and was thin to the point of rupture, while the anterior wall remained very thick. The contractions of the uterus during labor were reversed in direction and absolutely precluded delivery, except by artificial means. These facts were deemed sufficient to condemn the operation as long as any possibility of child bearing remains.

SIMULATING TUBAL PREGNANCY.

Dr. R. Pichevin in *Le Progres Med.*, June 29th, 1907, calls attention to conditions strongly simulating ectopic gestation and leading to errors in diagnosis. These cases occur most frequently in young women who give a history of delayed menstruation. Suddenly they have pain and have a show of blood, ordinarily of little quantity, but continuous, and sometimes accompanied with clots. The coincidence of an abdominal pain with uterine bleeding following a menstrual delay is suggestive of ectopic gestation. The uterus is not very large, but it may be larger than usual as the result of parenchymatous metritis.

In certain cases it is crowded upwards and to the front against the symphysis pubis. When due to a pyrosalpynx, this condition will be explained by an exudate of periadnexal serous infiltration. Perhaps more frequently the uterus will be more or less fixed in its normal situation. If the patient is bleeding, the cervix may be slightly soft and the os patent.

In Douglas sac a soft elastic tumor is left; sometimes quite voluminous and extending upwards laterally. The breasts are not enlarged, the areolæ are not pigmented; Montgomery's tubercles are not visible. There is neither nausea nor vomiting, although these are seldom marked in ectopic pregnancy. The predominating symptoms are, in short, the delay in menstruation and the consecutive bleeding. With the pain there is no evidence of internal hemorrhage. There is neither syncope, chills nor pallor. On the contrary there is usually fever, which may last several days. The masses in the pelvis strongly simulate hematocele, excepting that palpation may elicit pain. These masses quickly tend to harden. The previous history points to leucorrhea, labor, and especially to artificial abortion.

Besides pyrosalpynx, normal pregnancy, complicated by other conditions, may simulate ectopic pregnancy; also fibroid tumors, ovarian cysts with twisted pedicles, and appendicitis.

OCCIPITO-POSTERIOR CASES.

J. A. Harrer (*Lying-in Hospital, New York*, Vol. III, No. 4) found 1,446 cases of persistent occipito-posterior in 41,000 observed labors at or near full term. Of these, 1,013 terminated spontaneously, while 433 required assistance as follows: Manual correction of the position, 25 cases; forceps, 286 cases; version, 100 cases; craniotomy, 22 cases. The ratio of right to left posterior positions in the cases that rotate spontaneously during labor, was 18:1, while in persistent cases the ratio was 4:1. This shows that the occiput is more likely to rotate auteriorly in the right posterior position than in the left. The membranes ruptured in the first stage in one-fifth of normal vertex cases. While in persistent occipito-posterior cases they do so in one-half of the cases. The perineum is no oftener lacerated than in anterior cases uuless the head is pulled through the pelvis with forceps, with the occiput posterior. The maternal mortality was not increased. The fœtal mortality was 9 per cent. High forceps with head arrested at the brim gave better results than version. With the head in the pelvis the best treatment was found to be manual rotation, followed by forceps. In performing manual rotation great importance is laid on external manipulation of the child's body assisting in internal rotation of the head. Two sigus point to failure of rotation: (a) delay iu the advance of the head with strong pains, (h) regular advance of the head with gradually increasing extension.

VAGITUS UTERINUS.

Much scepticism has been expressed as to whether a child can be heard to cry iu utero; some believing that a noise resembling a cry must be due to entrance of air or to other causes. There seems, however, reason to believe that such a phenomenon may occur. Peiser in 1903 spoke of fifteen authentic cases. He himself, exploring during labor, distinctly heard a cry for several seconds; then meconium and stained liquor amuii came away. An anæsthetic was administered and a fresh examination made, when the child was once more heard to cry. It was delivered with forceps and cried out vigorously after birth.

Bacura reported in 1904 an instauce of vagitus uterinus during version. As the foot was drawn down the fœtus was heard to cry twice; the assistants all hearing the sounds which it made. The child after delivery breathed well for three hours, in spite of the fact that it was asphyxiated at birth. After its death, before it was five hours old, dislocation of the cervical vertebræ was detected on dissection. Bacura observed that this case proved that a child might live several hours after its neck had been broken during delivery. That accident, in his opiuion, occnrred in his case, during extraction—that is to say, after the neck was broken, cries were heard. This case might have proved of medico-legal interest.

Dr. S. Marx recently read a report of a case of vagitus uterinus before a meeting of the New York Obstetrical Society. He had already heard a fœtus cry *in utero* when he introduced his haud into the uterus for version in the course of a labor a few years ago. On the second and more recent occasion the arm presented, the child was large, and version had beeu unsuccessfully attempted; he was called in, and in

attempting to introduce his hand into the uterus several distinct muffled cries were heard, "pitiful and whining." They were repeated on three occasions, for the hand was passed into the uterine cavity three times before the version was accomplished. There was great difficulty in delivering the aftercoming head, and the child, about 12 pounds, was dead when extracted. Marx considers that the vagitus, which he calls the wierdest call for help that can be imagined, is uncanny, for it means that not much can be done, since most if not all of the children are dead before they can be extricated. Peiser, however, concluded from cases recorded that the prognosis when a cry is heard is by no means unfavorable to the fœtus. Marx's case was clearly an accident in a very severe labor; the big fœtus was impacted and unsuccessful attempts had already been made by another doctor; possibly many of the cases included in Peiser's series took place in maternities, where version was more readily and skillfully undertaken than in private practice. Dr. Marx stated that the term in question can only be applied when the fœtus is actually *in utero*. Cries when the head is in the vagina are, according to his own experience, not very rare. Very likely vagitus vaginalis has been confounded with vagitus uterinus more than once.—*British Medical Journal*, July 6th, 1907.

Pathological Notes.

Conducted by JAMES L. MAXWELL, M D.

EXAMINATION OF FLUID FROM PLEURAL EFFUSIONS.

The pathological examination of fluid withdrawn from the pleura aims at distinguishing effusions due to

1. Simple pleurisy.
2. Tuberculous pleurisy.
3. Pleurisy due to a septic micro-organism.
4. Hydrothorax.

It is of course doubtful whether the first of these classes really exists; probably in most cases the infection is tuberculous. Chemical, cytological, and bacteriological examinations may be carried out, and, if necessary, inoculation experiments on animals.

Chemical investigation helps very little in diagnosis; the fluid is generally highly albuminous, and often coagulates spontaneously, but there are no evident differences in chemical composition between the effusions due to different causes.

The examination of the cells in the deposit, obtained if necessary by centrifugalising, will generally help to differentiate a tuberculous pleurisy from one due to a septic micro-organism; in the former lymphocytes are abundant, in the latter polymorphonuclear cells, but the cytological examination unfortunately does not aid us in differentiating tuberculous from simple non-sepic pleurisy or from hydrothorax.

Bacteriological examination at once differentiates the septic pleurisies even before the fluid has become obviously purulent, the organisms being detected in films and in cultures. The pneumococcus is the organism present in the majority of cases; it is easily distinguished in films, but it must be remembered that this is a delicate micro-organism, and if the pus or fluid is left for some time before cultures are made, specially if it is left in the cold, the pneumococcus may die out and fail to grow in culture. Streptococci

are less commonly present. If they are recovered from cultures they can be differentiated by means of reactions in media into the *Streptococcus pyogenes*, and streptococci of a less harmful nature, occurring normally in the saliva or in the intestine. The presence of *Streptococcus pyogenes* in an empyema is of very grave prognosis. The salivary or fæcal streptococci and also the *Bacillus coli communis* are occasionally found in empyemata, which are then usually foul smelling. They may indicate that the empyema really had its origin below the diaphragm, or they may indicate that it communicates directly with a bronchus.

The detection of tubercle bacilli in a pleural effusion is a matter of great importance and of great difficulty. In empyemata due to tubercle, the bacilli may be abundant and easily demonstrated. But it is in cases of simple effusion in suspected cases of early phthisis that the detection of bacilli is more important and more difficult. Examination of the centrifugalised deposit will generally fail; examination of the coagulum which so often forms after digestion and centrifugalisation is more likely to be successful; but the only method likely to lead to satisfactory results is inoculation of the deposit from the effusion into a guinea-pig. Of course this experiment will take about two months to yield a result, but the question whether the patient, who will probably by that time have recovered from his pleurisy, has a tuberculous lesion or not is of such importance that it is to be regretted that the method is not made more use of.

ON CEREBRO-SPINAL FLUIDS.

The diagnostic value and importance of making chemical, cytological, and bacteriological examinations of the cerebro-spinal fluid cannot be overestimated in differentiating the several forms of infective meningitis and in distinguishing them from various pseudo-meningitic conditions.

It is always advisable to collect the first few drops of fluid separately from the rest, so that any blood that may have got into the needle in passing through the muscles may be dislodged before the fluid required for examination is collected. The whole operation is of course carried out under the strictest aseptic precautions.

When the fluid comes out under pressure there is usually some inflammatory condition of the meninges present, though not invariably so, for undoubtedly increased pressure may occur in cases of pseudo-meningitis in infants; the meningeal aspect being part of the clinical picture of broncho-pneumonia or other disease.

The value of the chemical examination of cerebro-spinal fluid is practically confined to estimating the albumin present Normally the fluid contains no albumin or just a trace only. The quantity of albumin is increased in all forms of infective meningitis, and the increase is the more marked when the infection is due to a pyogenic organism such as the meningococcus or the pneumococcus. The fluid in these cases is often turbid, and may be purulent. In the case of infection by the tubercle bacillus the fluid is usually quite clear, and the quantity of albumin not so markedly increased.

The cytological examination is made by centrifugalising the fluid and examining the deposit (or lowest layer of the fluid where there is no obvious deposit); films being made and stained by Leishman's or other appropriate stain.

In normal fluid, cells are not found at all, or, if any, one or two

lymphocytes and endothelial cells only. In tuberculous meningitis a large number of cells are present, and the differential count shows the presence of a marked lymphocytosis. Lymphocytes will be found to account for as much as 90 per cent. of the cells present.

In pyogenic infections (meningococcal, pneumococcal, streptococcal) the predominant cell present in the fluid is the polymorphonuclear leucocyte.

Bacteriological examination of the fluid is of the very greatest importance. By staining the films by appropriate methods the infecting organisms can usually be found in them; no exception to this statement must be made in the case of tuberculous infection, for, in fluids taken from cases of tuberculous meningitis (clinically such, and confirmed post-mortem) the writer has found tubercle bacilli present in over sixty per cent.

Diagnostically, lumbar puncture and examination of the fluid is of the greatest value; in skilled hands and under aseptic conditions it is a perfectly harmless procedure.

As a therapeutic agent lumbar puncture has not taken the place that originally was expected of it, though the withdrawal of fluid and relief of pressure is often attended with temporary beneficial results.—*St. Bartholomew's Hospital Journal*, October and November, 1907.

Correspondence.

EDITORS OF JOURNAL.

Will you be at Kuling?

DEAR SIRS: In consequence of Dr. Somerville's recent illness and enforced furlough, I have been asked to act as secretary for this year to the Kuling Branch of C. M. M. A. I should be obliged if all doctors, who purpose being at Kuling this year, would kindly inform me by post at their earliest.

Faithfully yours,

W. ARTHUR TATCHELL.

HANKOW, February 21st.

Ankylostomiasis.

DEAR DR. JEFFERYS: I am sending you just a line or two to let you know that I have recently had three cases of *ankylostomiasis*. All three were raftsmen and came from Pehshui (白水), a place still further up the Siang River than Hengchow, betweeu Hengchow and Yungchow. Of course the diagnosis, in each case, was made by finding the characteristic ova in the stools. The anthelmintics relied on were: (1) *Thymol*, and (2) *Eucalyptus oil;* the former given in three grs. xx dose, and the latter given in a m. xxx dose, combined with *chloroform* m. xlv, and *castor oil* dr. x. The *eucalyptus oil* mixture is certainly very much pleasanter to take than the *thymol*.

I am sending you this note *re* the presence of ankylostomiasis in this neighbourhood, as I believe you are trying to collect facts regarding the distribution of disease in this country. We know from Dr. Logan that ankylostomiasis is preseut in the north of the Province of Hunan, and you may take it from me that it is present in the South also. Hoping that this fact may be of some little value to you, and with kindest regards, I am,

Yours very sincerely,

ERNEST C. PEAKE.

HENGCHOW, January 27th.

As to "The Question of Title."

DEAR SIRS: On first thought "lady physician" was the form that seemed most fitting. Perhaps I should have said without or before "thought," for after exercising thought I find that "lady physician" is the term I have almost invariably *heard used* and that whether the WORDS "lady," "woman" and "female" convey similar impressions or not seems to depend upon the character of the known individual to whom they are applied or upon the tone of voice of the person using the terms when speaking of one who is a stranger to me.

In cold print "Dr. X., a female physician," does not present a different picture than "Dr. Y., a woman physician," or "Dr. Z., a lady physician," for we all know that the poorest, most ignorant WOMAN in the land may be a perfect *lady*, while among those *called* LADY there are not a few unwomanly *women*, and that, whether WOMAN or LADY, both *are* FEMALES.

If we are womanly, ladylike, it matters little what people *call* us, even though they forget (?) to give us our title of "doctor," for which we had to work as hard and pay as much as did our brothers for the same title and which, in their case, people seldom "forget" to give them.

Suppose "a new —— for such and such a station" is a teacher or evangelistic worker? what do you call her? them? Call us —— doctors the same, if there must be uniformity.

ONE OF THE "——DOCTORS."

Suchien Woman's Dispensary.

DEAR SIRS: I have nothing to report that is either scientific or extraordinary, but it is often the little things that help us in the long run more than the greater ones.

For example, take such a simple and cheap thing as *carron oil*. This I make with native bean oil and lime water. We all know of its use in burns, and it acts as well on any other inflamed surface. I have had most satisfactory results with it for internal piles. In these cases I combine it with *ergot* until the more acute symptoms subside. I keep small glass syringes, which I sell for twenty cents apiece to the patients for injecting the oil.

I have cured internal rectal chancroids by injecting this oil combined with *boric*, and it will relieve almost any rectal irritation.

COD LIVER OIL.

During our famine last spring, some firm sent us a barrel of *cod liver oil* for the sufferers. It came too late for distribution, so we are giving it out in our dispensaries.

I have never had it for free distribution before, and it is wonderful how it seems to suit the Chinese. Anæmic underfed babies, asthmatic patients, and those suffering from chronic bronchitis, or those improperly nourished from any cause, are wonderfully helped in a short while.

RINGWORM OF HEAD.

A foreign boy contracted a case of this in its most stubborn form. After trying everything to no purpose, the following prescription proved effectual:—

Acid salicylic	... gr. 30.
Alcohol	... oz i.
Chalk pulv.	... gr. 60 to 100.

The head is shaved and each spot covered with this. The application should be made once daily and a skull cap worn, which is kept sterilized by frequent boiling. The head will require shaving every two or three weeks. This treatment is simple, clean, painless, and thoroughly effective. I find some of the Chinese willing to wear the caps.

MENINGITIS.

It may be interesting to some to hear of a case of cerebral meningitis that ended in complete recovery without any lesion so far as can be seen. A missionary's baby, aged fifteen months, after returning from Kuling the earlier part of September, had a spell of cholera infantum, which after several days developed slight dysenteric symptoms. Her condition was grave from the first. On the eighth day she became unconscious, which was complete for ten days.

She continually rubbed her eyes and forehead, rolled her head on the pillow, cried out, and had retraction of the head. The muco-purulent discharge from the eyelids, indication of optic neuritis, was quite profuse. Her return to consciousness was so gradual that it took eight days for her to really recoguize things, and during that period and for two weeks longer her restlessness was extreme, but no symptoms of chorea.

She slept neither night nor day. Bromides had no effect whatever. Chloral in 3 gr. doses would put her to sleep, which would last for an hour or so. Her spasms were of the hysterical type, which I find does occur in true meningitis.

An interesting feature was, although no fever, temperature rarely more than 100° per rectum, that for the ten days of unconsciousness she had no secretion from the nose and no tears.

The Chinese make so much of these signs that her nurses would constantly watch and would say "just wait until she sneezes and all will be well." At the first return of consciousness tears appeared, then in a day or so secretion came in the nose, and strange to say the day we felt certain her convalescence was established, she sneezed. Her nurse clapped her hands and said: "The disease is over," and so it proved.

Her convalescence proved very, very slow. I will take it as a special favor if any doctor who has treated a similar case would write about it, either through this JOURNAL or to me personally.

Dr. J. W Bradley saw the case with me, in consultation.

Mrs. B. C. PATTERSON.

SUCHIEN, December, 6, '07.

Personal Record.

BIRTH.

To Dr. and Mrs. W. A. HEMINGWAY, on the twenty-fifth of January, 1907, at Taiku, Shansi, a daughter.

On February 3rd, at Yung-chun, Fuhkien Province, the wife of J. PRESTON MAXWELL, M.B., F.R.C.S., of a daughter.

MARRIAGE.

At the Wesleyan Chapel, Hongkong, on the 28th December, 1907, by the Rev. C. BONE, Rev. PHILIP REES, B.A., B. Sc., M.B., of the Wesleyan Hospital, Wuchow, to ETHEL CRASKE, eldest daughter of Mr. and Mrs. OSWALD CRASKE.

A. A Rare Form of Leprosy.

B. A Typical Case of Tubercular Leprosy at a late stage.

HIAO-KAN LEPER HOME, 1907. *(See Page 210.)*

The
China Medical Journal.

VOL. XXII. MAY, 1908. No. 3.

Original Communications.

[All copy must be in the hands of the Editors one month before date of publication to insure appearance in the following number. The editors cannot undertake to return manuscripts which are sent to them. A complimentary edition of a dozen reprints of his article will be furnished each contributor. Any number of reprints may be had at reasonable rates if a *written* order for the same accompany the paper.]

GYNAECOLOGICAL PRACTICE IN CHINA.*

By AGNES L. STEWART, L.R.C.P. and S.E., M.D. (Brux.), Hankow.

The treatment of women's diseases is certainly attended with difficulty, first because many patients object to vaginal examination, though this is not so great a difficulty as formerly, but even now many prefer to do without treatment rather than be examined; another difficulty is that the patients want symptoms cured rather than disease; the cure of the disease being often too radical a measure for them.

Of symptoms, as far as my observation goes, dysmenorrhœa and dragging down pains are *not* common, but amenorrhœa, too frequent menstruation, rectal and sacral pains, and leucorrhœa, this last especially in elderly women, one is consulted about constantly, and on examination one often finds nothing abnormal to account for the trouble. A married woman of 22 was sent to me for examination. She had never menstruated, nothing abnormal could be found to account for it, the uterus was not small, and she was not markedly anæmic. She was given an iron and arsenic tonic, of which she may have taken three or four bottles, and within a few months was menstruating regularly. Possibly marriage wakened up her dormant uterus.

EXTERNAL DISEASES.

External diseases of vulva and vagina coustitute a large percentage of our cases—vulvitis of every type, venereal warts, abscess of Bartolin's gland, erosion of the os, and leucorrhœa, with occasionally an external new growth. One such case was interesting on account of the size of the tumour. The notes of the case are as follows:—

* Conference paper, May, 1907.

Mrs. Ts'un, widow, 46. Fibroma.—The patient is a strong woman, who has always had good health. There is a pedunculated tumour hanging from the right labia to below the knees; it is hard, lobulated, and freely moveable. Length 19 inches, width 15 inches. Skin is lax and free from inflammation; inguinal glands are not involved, and the patient looks well. Chloroform was given and the tumour dissected out of a three-inch incision. The tumour weighed 12¾ lbs. and was a fibroma.

Uterine Diseases.

(a). Of inflammations, endometritis is often met with, and usually yields successfully to treatment. Even in this condition dysmenorrhœa is not often complained of, though one has seen membrane passed in form almost a complete cast of the uterus. Curetting is rather fashionable with us just now, as some patients have given birth to children after the operation; the improved condition of the uterus allowing them to carry the child to term.

(b). Uterine displacements.—Of these prolapse is the most common, and this is easy to understand when one remembers Chinese methods of delivery, the sitting posture with exhausting bearing down efforts of the patient, the method used of a woman sitting behind with her arms round the patient forcing down the uterus, and finally the awful plan of pulling on the cord to remove a retained placenta. On several occasions, when called to remove a retained placenta, one has found the woman sitting up, with the anterior vaginal wall and cervix outside the vulva and the midwife *still vigorously pulling on the cord.* Some of these cases, if treated at once by the replacing of the organ, and after by the use of a pessary, ultimately recover. But others who do not get foreign treatment, often go on for years with complete prolapsus uteri. Last year a woman of 50 came to dispensary who had had complete prolapsus for twenty years. She came not to get the prolapsus cured, but to get an ulcer which had formed on the extruded part healed. She absolutely refused all treatment but a lotion. Rest, pessary, operation, were all scorned, and so she gained nothing.

Several cases have been cured by the use of a ring pessary and anterior colporrhaphy. This is a simple proceeding, and does not cause so much narrowing of the vagina as posterior colporrhaphy, which is a consideration, as many of these patients are at the child-bearing period of life. The operation of anterior colporrhaphy consists in dissecting off a piece of the mucous membrane of the anterior vaginal wall and bringing the sides of the raw surface together with stitches. The shape is not very important, but an oval dissection, with the long axis of the oval parallel to the long axis of the vagina, is best, as the object is to narrow the outlet of the vagina.

The use of a pessary is a very debateable point in China. Even in large cities at home, patients are often careless about coming to have them cleaned. I remember digging out something that felt like a stone from a woman's vagina in Dublin. It was a ring pessary that she had worn for two years, and was thickly encrusted and was very difficult to remove, being buried in the tissue about it. In China one ought to be careful, I think, not to use a pessary unless one can, if necessary, send for the patient if she fails to put in an appearance for herself.

Other displacements are rare. A few cases of retroflexion and retroversion come to mind, but nearly always it was in connection with a gravid uterus, and one was sent for because of retention of urine.

(*c.*) *New growths of the uterus* are common, but those one is called upon to treat are usually malignant. Fibroids rarely come to one's notice. Polypi, with long pedicles, are more frequently under one's care, because sometimes they can be seen, or excessive bleeding is caused by them during labour. But on the whole these are not considered serious enough for the patient to consent to operation, and she will only swallow drugs when troubled with hæmorrhage.

Cases of cancer and sarcoma of the cervix and also of the body of the uterus, very frequently come for help, but as a rule *too late* for operation. The refinements of early diagnosis of uterine or cervical cancer are usually not required. As a rule the smell of the patient as she walks into the room is sufficient to indicate the disease, and also its advanced condition. I have never yet managed to persuade a case suitable for operation to have amputation of the uterus, and so have had only palliative measures to resort to.

Injuries.

Injuries during child-birth are very common, and a good many cases come to get these injuries repaired. Rupture of the perinæum is common everywhere, but here nearly every woman one examines has a ruptured perinæum. Unless unusually severe, I do not think any Chinese woman would consent to have an operation for it, as it seems to cause them very little, if any, inconvenience.

Another result of tear is, however, more serious to them, and calls for treatment. That is when the tear heals by granulation, occluding the vagina and causing atresia vagina. I remember several cases where there was a complete septum joining the two labia. This was divided, and the vagina not being implicated, the parts healed and there was no further trouble.

Another case had but a pinhole opeuing which it took some time to find. It was gradually dilated with probes and sinus forceps until it was of a size to admit a finger. Incisions were then made on both sides, cutting towards the tuber ischii aud a glass speculum inserted. One must keep in a plug and make a large opening, as the parts contract down agaiu, the contraction goiug ou for a mouth or six weeks after operation.

One case of congenital atresia vagina comes to my mind.

Mrs. L., aged 19. Her mother came to say that her daughter was "the Bride of Heaven," but as she was newly married they wished her to become an ordinary woman. Patieut has been married three months, and is subject to fever. Complains of abdominal pain, and has never menstruated. Great pain every month. The abdomen on inspection is tense and large. There is resonance in both flanks, and just above the brim of the pelvis is a central globular swelling. Dullness and tenderness ou pressure over the pelvis. Shape of vagina is externally natural. No bulging of the hymen. There is not the slightest opening into the vagina *Per Rectum*. A mass, rounded, globular, hard and tense, and fairly moveable, cau be felt within 1½ to 2 iuches of anus. Apparently a complete septum between the vagina and the uterus.

A false vagina was made, and the knife being plunged into the sac, the usual treacly fluid evacuated. There was a little subsequent fever due to parasites, but the patient recovered and menstruated regularly for years, and was to some extent able to fulfil her functions as a married woman.

Tears and sloughs of bladder and urethra are common results of Chinese midwifery, so one gets a good many cases of vesico-vaginal and urethro-vaginal fistula leading to incontiuence. When a fistula has formed by sloughing from pressure, there is uot incontiuence until the slough separates, and as it is more often the result of pressure than of direct injury from muscular effort, the usual history is of long and difficult labour, and about a week later incontinence. The diagnosis is made by physical examination by exposing the vagina with a speculum.

The curative treatment of a fistula is a plastic operation. It is best to wait some time—six weeks to three mouths after parturition—as the tear may close spontaneously, and also because involution ought to be complete, and so the tissues be firmer and less vascular.

Ovarian Cyst.

No lady medical can be long in China without meeting another class of case—that of ovarian cyst. Ovaritis is not often complained of, aud perhaps cystic ovaries are not really so common, but their size impresses them firmly on one's mind. Every year one meets three or four such cases, but only au occasioual oue—say oue out of five—is

willing for operation. The only ones that have consented to operation during my charge have had cystic parovarium, and one had a solid ovarian tumour. It has certainly been a case of gathering experience little by little. It is hardly necessary for me to go over the steps of the operation to such an assembly, and I will content myself by giving two cases and raising an important question for discussion.

In the general teaching of the home operators, tapping the cyst previous to removing it is strongly condemned. But these very large cysts with which one has to deal in China, cysts that displace the heart, would it not be better, in such cases, to empty the cyst at one time, sew the cyst wall to the abdominal wall and remove the cyst in a couple of days? This question is asked because it has occurred to some of us that death, said to be due to shock, is due rather to the vast mass of fluid and tumour taken away; than to ordinary shock following operation, no satisfactory reason being otherwise found for death in some cases. Below are described two cases, both alike in many particulars. Why did the first one recover and the second one die? In both cases the operator was the same.

CASE 1, 1900.—Mrs. Hsiung, aged 21, married, seems cheerful and happy, but is a very thin woman. From the time she was a young girl the patient thinks the abdomen was enlarged. Menstruation regular in time, scanty in amount, very dark in colour and associated with dysmenorrhœa. Has been married four years, has one child a year old. During pregnancy abdomen enlarged very rapidly, and has since grown a good deal. No menstruation since. Weight of patient, 176½ lbs. The abdomen is much distended, with enlarged surface veins; umbilicus flush with surface. Dulness over the tumour and resonance in both flanks. Circumference at the umbilicus fifty-four inches.

At the operation, which lasted two and a half hours, the only adhesions were to the anterior abdominal wall and to a small piece of bowel. There was fever ranging from 99 F. to 102 F., and several lumbricoids were voided. The wound healed by first intention, and the patient's weight a month later, when she had put on a great deal of flesh, was 95½ pounds. The tumour must therefore have weighed between 80 and 100 lbs.

CASE 2, 1905.—Mrs. Li, aged 21, married. The patient has had a hard life, with heavy work and many beatings from her mother-in-law. Commenced to menstruate at 16; after a year it became scanty and dark in colour; has ceased for two years. About five years ago she noticed a small swelling on the left side, and this gradually increased in size. Last year had a "bad attack of abdominal pain," probably peritonitis, and nearly died. Occasionally faints. Patient looks older than her years, is thin and emaciated and eats very little. Abdomen is universally distended, but in the left lumbar region there is a daughter cyst. Girth at umbilicus is 51 inches; 6 inches above it is 52 inches.

P. V.—Os is smooth and small. Uterus small and to right; ovaries cannot be felt; uterus apparently not adherent. Tumour is on left side. Heart is displaced

upwards to third interspace, and there is venous congestion over the chest and abdomen. Aortic sound is *not* pure, though there is no distinct murmur. Sometimes pulse misses a beat.

The operation lasted one and a half hours. There were adhesions to the anterior abdominal wall; these were peeled off with a gauze pad; adhesions to omentum were plentiful; these were tied, outside the abdomen, and cut through. There was very little bleeding throughout the operation, but some ascites. Four ligatures were placed on the pedicle, as it was very thick. The patient's pulse at the close of the operation was 84. She was put back to bed under the care of two very competent nurses; she soon recovered consciousness, and recognised the nurses, but was not really clear in mind. Pulse was 100. Seemed thirsty and restless, and hot water was given in spoonfuls by the mouth, and saline injections into rectum, and subcutaneous injection into axilla. Pulse improved. About 4½ hours after operation the patient suddenly fainted. I was on the spot at once, but she could not be restored. The abdomen was opened at once, but the pedicle was not bleeding. One could only say "death from heart failure"—but why? Would she have recovered if we had first removed the bulk of the fluid? This question has often presented itself since the operation, and I should be glad to receive the opinion of the Conference on the point.

UTERINE FIBROIDS. OVARIAN CYST.

By CECIL J. DAVENPORT, F.R.C.S., Shanghai.

I. UTERINE FIBROID.—PAN-HYSTERECTOMY.

Mrs. Liu, aged 41, admitted May 20th, 1907, into the Shantung Road Hospital, suffering from an abdominal tumour.

History.—The abdomen was noticed as increasing in size six years ago. The presence of a tumour was first discovered in the region below and to the right of the umbilicus. Of late its growth has been more rapid. The menstrual periods have been regular, but more scanty than formerly; some pain with micturition at these times. Has had three children. No pregnancy for eight years.

Condition.—A healthy, well nourished lady. Pulse, temperature, heart, lungs, all normal. *Urine* 1020, a suspicion of albumen.

A hard, smooth, freely moveable tumour occupies the lower abdomen, about the size of a seven to eight months' pregnant uterus. It is placed rather more on the right than on the left. P. V.—Uterus

high up and intimately connected with the tumour. No uterine sound passed.

Seeing that there was no increase of the menstrual flow, that it had first been noticed on the right side, that its growth was rapid, and that it was freely moveable, I diagnosed it to be a growth of the right broad ligament and advised removal.

Operation.—At 11 a.m, 23rd May, with the help of Dr. W. J. Milles, the patient was given chloroform. Exploration through the usual three-inch incision proved the growth to be uterine, and it was decided to remove the uterus. The incision was extended two or three inches above the umbilicus and the tumour delivered through this with some little difficulty. No adhesions were present. The neck of the uterus was long and well defined. Clamps were applied external to the appendages, which were none too healthy, and the broad ligament tied step by step with thick silk on either side until the uterine vessels were secured close to the neck of the uterus. Anterior and posterior flaps were then made, and the uterus removed by an incision about the middle of the neck. Silk stitches united these flaps, so closing the upper opening of the cervical canal. The cut edges of the broad ligament were then drawn together and secured as far as possible, using the silk ligatures already in situ. The abdominal cavity was then sponged dry and its walls closed with silk worm gut sutures. A dry dressing was applied. This was changed on the sixth and tenth days, when all stitches were removed. No vomiting followed the operation, and the patient went out well in a month, having had no temperature above 99.2 and no pulse rate above 86.

Remarks.—The tumour weighed 6¼ lbs. and appeared to be a general enlargement of the fundus and anterior uterine wall—possibly taking on a malignant nature. The posterior wall was thin and flabby. After removal, a sound entered into the uterine cavity three and half inches.

II. Uterine Fibroid.—Spontaneous Expulsion.

Mrs. Chu, aged 43, came to out-patients' 22nd July, 1907. On examination it was found she was suffering from a most offensive thick yellow vaginal discharge, with a dark, congested, ulcerated mass distending the vulval entrance. A hard elastic tumour was impacted in the vaginal canal; its presenting part giving all the appearance of a fœtal head presenting with a caput succidanium. The finger could not be passed into the vaginal canal.

She gave the following history :—

History.—For three years she had been troubled with menorrhagia ; at times passing clots. Had noticed a hard lump in abdomen over the pubes. Five months ago was aware of "something coming down," and as this advanced the abdominal tumour disappeared. Had no pains resembling labour, but as the mass descended and distended the vagina, suffered pain. The descent had been much more rapid during the past two months.

Diagnosis.—Polypoid fibroma of uterus, undergoing expulsion. Patient was advised to come into hospital. She went home to consult her relations.

Subsequent History.—29th July. Patient carried in, again looking very ill. Temperature 101.8 ; pulse 120, evidently suffering from severe septic intoxication. Some vomiting. On examination the fœtid odour was simply awful—a black, gangrenous mass protruded from the vagina ; the mass being as large round as a well developed arm and reaching half way down to the knee.

Treatment.—The patient was put into a continuous hot bath and given ergot and hydrocyanic acid. The mass very shortly came away, and in a week the patient returned home well.

Vaginal examination showed the uterus to be a little bulky, the os somewhat patent with erected edges. No discharge.

III. Ovarian Cyst.—Ovariotomy.

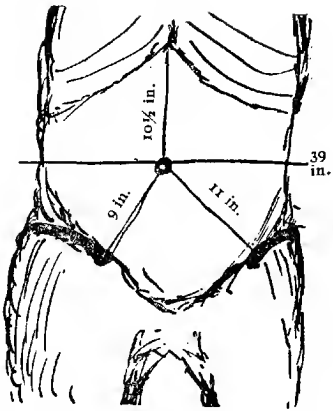
Mrs. Liang, aged 40, a small, frail lady, admitted on 28th August, 1907.

History.—For six years the abdomen had not been normal. For the last year it had been "big." Youngest child 9 ; a miscarriage previously. *Menstruation* scanty, no pain. Some leucorrhœa. *Bowels* costive, hard, once in four days ; *urine* scanty, passed twice during day, not at night. Takes a little opium. Feels better after a little diarrhœa. Some swelling of the legs the past few days.

Condition.—Thin and pale, with sunken cheeks and a haggard expression. *Pulse* regular, hard, 90-96. *Urine* 1010, slight trace of albumen. *Heart* and *lungs* natural. *Abdomen* tensely distended and prominent. Large veins marked in hypogastric and epigastric regions. Quite dull, except in extreme flanks and below arch of thorax.

Measurements:

(See Diagram).



Examination P. V.: Uterus high up, fornices full. The cystic thrill was so marked that it pointed to the cyst being unilocular.

Operation 3rd September, with the help of Dr. Marshall, chloroform administered. On opening the abdomen through a three-inch incision the cyst was found adherent in front. The incision was extended three inches upward. After puncturing and draining the tumour, which consisted of one large and many small cysts, containing over two gallons of porter-brown fluid, the adhesions all over the front abdominal wall and under the costal arch were stripped off. No further adhesions were found of any account except in the pelvis. These were ligatured and the pedicle tied in two halves with strong silk and the tumour removed. The tumour was from the right ovary. No bleeding took place, the abdominal cavity was sponged dry and the abdominal walls were united with silkworm gut and dry dressed.

In the evening and next day the patient was rather restless, mouth dry, a little vomiting, great pain over costal arch, oppression in breathing; pulse hard, 106-108, temperature 100-102 over. Hot foments over the costal arch relieved the pain; hypodermics of quarter grain of morphia were given two to three times a day; after twenty-four hours, during which time only sips of hot water were allowed, a little rice water was given. On the fifth small doses of calomel and soda bicarb were given three times a day, also hydrocyanic acid and acetate of ammonia.

On the fourth and eighth days the wound was dressed and stitches removed. But for some superficial stitch abscesses and a little skin excoriation the wound healed perfectly.

On the fourth day the patient felt so well she indulged in some pear, which caused a little dysenteric diarrhœa.

She left hospital within a month well and strong; cured of her opium and tumour also. The measurement round the abdomen at the umbilicus on leaving was twenty-four inches and the umbilicus to the other points five inches.

LARGE OVARIAN TUMOR, WITH 60 Lbs. OF FLUID.

By R. T. Booth, M.B., B.Ch., D.T.M. and H., Hankow.

Patient, a Chinese woman of about forty-five years of age, an opium smoker, with history of enlargement of abdomen for several years. History of manner of growth of swelling and measurements made diagnosis of ovarian tumor from left side easy. She entered hospital on 14th November, and it was decided to operate on the following Tuesday. On the 15th, however, she developed a temperature of 100.2°, so it was necessary to postpone operation for a time. In the meantime she was carefully prepared and generally toned up.

For two days before operation special attention was paid to diet and bowels, and enemata and douches were given daily. On the morning of 26th November she was put on the operation table, and, Dr. Cundall giving chloroform, with the assistance of Dr. Morley, of Tehngan, I operated. The incision was made in the middle line, commencing about two inches below the umbilicus and extending downwards for four inches. Reaching the peritoneum all hæmorrhage was stopped before opening it. The peritoneum was then picked up with two dissecting forceps and a cut made with a pair of scissors; a rush of ascetic fluid followed immediately. The peritoneum was then slit up and down on a Hey's director; the edge being seized with special catch forceps. A hand was then passed in as far as possible to free tumor wall from peritoneum, to which the former was adherent above. Abdominal towels were then packed in around the edges of wound between tumor and abdominal wall and the cyst punctured with a large Spencer wells trochar. No fluid escaped at the sides of the trochar; all passing through the tube into a large "kang" under the table.

As the fluid escaped and the walls of cyst became lax, large forceps, Nelaton's and others, were clamped in the cyst wall, and by aid of these the assistant lifted the tumour more and more out of the wound until sufficient fluid had escaped to allow several inches of cyst wall to come out and hang over the edge of the wound and thus drain. The flow of escaping fluid was controlled, so that the emptying of cyst should not affect the heart and respiration. When nearly emptied the opening in cyst was clamped and a hand was passed in to ascertain the extent of adhesion. It was found that the lower half of the tumour was perfectly free from adhesion, but the upper half was adherent to the peritoneum, to the under surface of liver, to the omentum and stomach. None of these adhesions were dense; all being easily peeled off with a

sponge, and little or no oozing took place, except in one and two places and then it was easily controlled by pressure with a hot sponge. (It was necessary to prolong the incision above the umbilicus several inches in order to get room to deal with these adhesions.) It was found that a subsidiary cyst occupied the upper segment of the large cyst, and subsequently it was found that the contents of this cyst had become purulent, explaining the adhesions being located in this part, while the remainder of the parent cyst wall was quite free. Before freeing the deepest adhesions the pedicle was ligatured and the tumour cut away from it, thus enabling the adhesions above and behind to be more easily dealt with.

All adhesions being freed the tumour was removed and the toilette of the peritoneal cavity commenced. Sponges wrung out of hot sterile water were used and all the cavity was carefully gone over. Following the advice given by G. Smith and others, "when on doubt, drain," it was decided to drain, as the adhesions had been fairly extensive, though none had been dense. A Keek's glass drainage tube was inserted into Douglas' pouch and left protruding from the lower end of the abdominal incision. The peritoneum was brought together with a continuous suture of Pagenstecker's celluloid thread and the muscles were next united by a continuous chromic gut suture; the skin being finally brought into apposition with interrupted sutures of silkworm gut. No antiseptics were used from beginning to the end of operation, everything being aseptically prepared, with the exception of the scalpels, which had been previously soaked in pure carbolic. The operation from first cut to last suture took 1¾ hours. The 'kang' which held 60 'chin' of fluid was two-thirds full; there being in all about 60 lbs. of fluid removed. Dressings were put in position with separate dressing surrounded by indiarubber sheet for the drainage tube. All dressings were held in position by broad bands of adhesion plaster, and finally a many tailed bandage was put on over all.

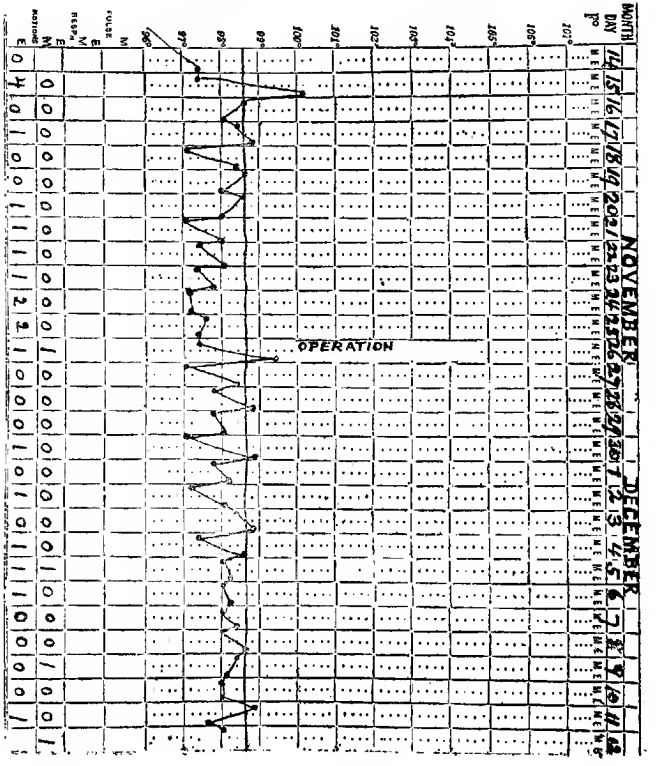
The patient was then removed to her bed, which had been arranged in the corner of the operating room. Her subsequent history was uneventful; a rise of temparature the night after the operation being a good sign, showing that she was reacting well. Her thirst and restlessness was controlled by large enemata of warm saline solution, to which was added her quantium of uepenthe to counteract the craving for opium.

The dressing around the glass drainage tube was opened in twenty-four hours, but as there seemed to be still some amount of sanguineous fluid in Douglas' pouch it was decided to leave it in position for another

twenty-four hours. Everything being sweet and pure, and the amount much less the next day, the tube was removed and the edges of the wound brought into apposition by a deep silkworm gut suture passing through muscles and skin, but avoiding the peritoneum. Dressings were changed a week later and half the sutures removed, and the wound was soundly healed. The remaining sutures were removed seven days later, and strapping placed right around the abdomen.

After the first four days the patient was gradually brought back to ordinary diet and the recovery was entirely uneventful. Her husband, who was a tailor, made her a strong abdominal belt, and with this on she left the hospital in about six or seven weeks after operation.

TEMPERATURE CHART OF ABOVE CASE.



REPORT OF A CASE OF ECTOPIC PREGNANCY. RUPTURE, OPERATION, RECOVERY.

By ELIZABETH REIFSNYDER, M.D., Shanghai.

Abdominal sections, so far as *our* experience here goes, have been done almost exclusively for the removal of large tumors, mainly ovarian. The Chinese have had a great fear of opening the abdomen, and many are still possessed of so many fears in this direction that it is a most common thing to be asked if it is our intention to open the abdomen when a women gets on the table for a most simple examination, and while the knowledge of the sucessful removal of tumors may inspire confidence in one class of patients, with many it certainly does make them very fearful of us.

Hence we are not surprised that so long as the woman is not inconvenienced and can get about and do her work, if *poor*, she will not seek relief, and it is usually because she has become a burden to herself and to her family that she and they are willing for the operation to be done. Even then the majority wait until they suffer greatly from weight or pressure and become, as has been stated, "a burden to everybody."

One case operated upon here some years ago had not walked for two years. Her husband's family got tired of her and gave her barely enough to eat. She lived in spite of them. Wonderful powers of endurance. She lived through her operation, and her son, a lad of nine years, born after her operation, came to see us not long since, and her father-in-law has just brought us about a bushel of peanuts. While at first it was the poorer class, the ones who had to work for their living so to speak, who came for operation, now we have different classes—well educated and wealthy. Conservatism is giving way, as will be seen by the fact that of the four abdominal sections done since the middle of July, three were on private patients. Two others, also private, came for operations, but were found to be inoperable cases, one because of a bad heart. It is difficult to make the Chinese believe what they cannot see. Being deceived for centuries, and deception still going on, why should they believe when told their condition. Christianity and education will bring confidence and belief, as was the case in the subject proper of this paper, namely a case of ectopic pregnancy which came under our care recently and of special interest because the first patient to be operated upon for this condition, although there have been several others in the past. In two cases, complicating normal pregnancy, the tumors

that were most distinct disappeared; other symptoms, apart from the boggy masses felt, were shock, hemorrhage, pain. Both patients came into the hospital, were under observation for some time and recovered without operation, for we know that after rupture if all the blood supply, or nearly all, is cut off from the fetus, it loses its life and if very small may be absorbed.

One of these cases Dr. Garner saw with me some years ago. The patient came in in collapse. The boggy mass on the posterior cul-de-sac was so large—a hæmatocele—that the midwife thougbt the woman was about to be confined. This woman's friends were told of the gravity of the case and the possibility of necessity for operatiou. The mass was absorbed, the woman having fever for some weeks, no doubt septic. She went on to confinement, however, and had no sepsis at that time.

The other case entered the hospital May 16th of this past year. Last child born two years ago; not menstruated since, except a month ago a few times bloody discbarge. Two nights before admission "fell down in a dead faint," her hushaud said, who speaks excelleut English and who is a wealthy educated gentleman. Patient had been having pain iu the lower part of the abdomen for the past ten days; most severe the last three days, and it was the excruciating pain that caused her to faint. Dr. Newell saw tbis case with me. A boggy mass was felt to right of uterus. Uterus large. Patient was kept in hed and the husband was willing for the operation. Mass disappeared, and about a month ago a son was horn; no sepsis.

While in these two cases cited, there were no operations to prove the diagnosis, the symptoms were so marked that there was no doubt in our minds as to their heing ectopic pregnancies. In a recent numher of the *American Journal of Obstetrics and Diseases of Women and Children*, Dr. Tbos. Kelly reports a number of cases of ectopic pregnancy, and after saying that "ectopic pregnancy is a condition in which the fertilized ovum is prevented from reacbing the uterine cavity and develops to a greater or less extent at the point of arrest," he further remarks that "nearly all these gestations are primarily tubal, but may hecome abdominal, or broad ligament, pregnancies hy rupture of the tube, or tubal abortion. The pregnancy may occur iu any part of the tube. Interstitial when in that part of the tube which penetrates the uterine wall; isthmic when near the middle of the tube; ampullar when near the outer end, and this last mentioned is said to be the most common, and may terminate in tubal abortion; the ovum being extruded iuto the peritoneal cavity. The isthmic is more common thau the interstitial, aud usually terminates

by rupture of the tube." The case to be reported is of the isthmic variety and is as follows:

Mrs. S., aged 33, was first seen by myself about 9 p.m. on December 17th. When her husband came for me he said he feared his "wife was having a miscarriage and would I go and see her." She had not menstruated for seventy days and had had a decided hemorrhage that afternoon. Attributed the miscarriage, as it was that, to the lifting of a trunk several days before. I found the patient fairly comfortable. Pulse and temperature normal. Uterus was large; some pain, not much. No appetite and not able to sleep, was what she complained of mainly. On inquiry found she had two children: one fifteen years old, one nine, and it was when she said "no children for nine years," that ectopic pregnancy suggested itself. Mrs. S.'s pain had begun the 15th. A Chinese doctor was called the 16th, another one the 17th. Neither did any good; the pain continued. When I saw her the night of the 17th, as I said, fairly comfortable, I gave her a pill of opium and camph. ½ gr. each, and strongly advised coming to the hospital, so that she could be watched. I did not then think it was ectopic pregnancy, as I had not examined thoroughly. Only satisfied myself there was nothing in the uterus that would have to be removed immediately. Saw the patient again the morning of the 18th and told her husband to bring her to the hospital, for if anything happened she might die before I could get to her, living so far away. She came the afternoon of the 18th; very comfortable that day and the next; no fever, pulse normal, only no appetite and unable to sleep. Bowels moved with small doses of calomel. Some slight vaginal discharge. Patient was kept in bed awaiting developments. I could get no history of any membrane coming away at any time. While it would have been more satisfactory to have made a thorough examination as soon as admitted, in the light of our present knowledge I am glad nothing more was done, for I feel sure the woman's condition later would have been said to have been caused by manipulations. Morning of the 20th, about 10 o'clock, after getting up to urinate, she was seized with severe pain, vomiting, and developed almost immediately numbness of hands and feet. Pulse very feeble, 120. Sent for husband at once, and while waiting, injected both breasts with normal saline solution. Below the umbilicus and occupying the left side of lower abdomen was a mass dull on percussion and showing rigidity. About noon got the husband's consent to operate, although he was told his wife might die on the table. He was most intelligent; had lived in America some twenty years, and fully understood what was to be done and was in the operating room during the operation. The patient

was not told of the operation, neither were her daughter or any of the other women relatives. The husband evidently did not feel called upon to tell them.

No radial pulse when anæsthetized. Had been given brandy by mouth and strychnine hypodermically while waiting for husband to arrive. Operation about 1.30 p.m. Just before the operation both breasts again filled with normal saline solution. As soon as the abdomen was opened a number of large clots appeared and a number of others were removed—from the left side, mainly. Pulse steadily worse. Patient in Zendelenberg position from beginning. Left tube and ovary removed. Tube found ruptured about at middle. Tissues very friable. A quantity of normal saline was left in the abdomen after all clots that could be found were removed ; the abdomen well flushed. After the abdomen was closed both breasts again filled with normal saline. Pulse 180, imperceptible at wrist. By 4 p.m. slightly felt at wrists and 162. Nothing special about the after-history. As the patient had not been told she was going to have an operation, knew nothing about it. Thought she was given the anæsthetic because of the strange feeling in her head. It was not until the following morning when she wanted the abdominal bandage removed that she was told her abdomen had been opened.

A SEVEN-DAY FEVER CHARACTERIZED BY TOXAEMIC JAUNDICE.

By HAROLD BALME, F.R.C.S., England.

The occurrence of jaundice in connection with febrile conditions is a phenomenon of considerable interest, presenting problems which form a striking commentary to our present ignorance on the subject of human metabolism. We commonly speak of such jaundice as hæmatogenous, and content ourselves with the explanation that it is toxæmic in origin, but as to the nature of the toxins, or the method by which the normal circulation of the bile is upset by their presence in the blood, we are still absolutely in the dark. Not until our methods of studying toxins and their effects are more advanced shall we be able to find a satisfactory explanation of such a phenomenon. Meanwhile it may be of interest to chronicle such cases as they occur, so as to have as complete a chain of clinical observations as is possible.

We are at present all familiar with certain diseases of a more or less infective nature in which jaundice, presumably toxæmic in origin,

is apt to form a fairly prominent symptom, such, for example, as yellow fever, malaria, relapsing fever, or that rare but most fatal condition—acute yellow atrophy. There is, again, another group of fevers in which the appearance of jaundice is much more occasional, as for instance, typhus, enteric, scarlatina, etc. But there is yet a third group, probably quite distinct from either of these two, in which jaundice, together with pyrexia and general toxæmia, seem to be the leading characteristics, and it is with this group that the following remarks are concerned.

In 1886 Weil first described a form of acute infectious disease associated with pyrexia and jaundice, a condition which has since borne his name. According to Osler, Weil's Disease usually attacks males of from twenty-five to forty; butchers, for some strange reason, being said to be specially liable to the complaint. It occurs mostly during the summer months and in large cities; the condition being ushered in with high fever, severe headache and pains in the back and legs, whilst on the second or third day jaundice, varying from a slight tinging of the conjunctiva to a marked pigmentation of the whole body, makes its appearance. The liver and spleen are both as a rule somewhat enlarged; the former being tender. The fever shows marked remissions, and usually continues for ten to fourteen days, after which there may also be slight recurrences, though definite relapses are rare. Albuminuria is common, and there may occasionally be cerebral symptoms, but as a rule headache and great prostration are the only marked characteristics of the disease, apart from the jaundice, and recovery usually takes place.

Since Weil's Disease was first described as a separate entity, there have appeared from time to time in the medical journals descriptions of various epidemics of a more or less similar nature occurring in different parts of the world. An account of one such epidemic was given in the *British Medical Journal*, December, 1901, similar to Weil's Disease in everything, except the nature of its onset, which appears to have been quite gradual and marked by drowsiness, headache, and various abdominal symptoms. The incubation period of this fever was stated to be six to seven days, whilst jaundice was an invariable accompaniment. In 1902 similar epidemics in Peking and Tientsin were described by Curwen in the same journal, whilst in its issue of September 17th, 1904, a further account was given of two epidemics in Egypt and South Africa respectively. The former of these, described by Sandwith, appears to have been of a much more serious nature; the mortality actually reaching thirty-two per cent. The incubation period was not usually

longer than two days, the onset being quite acute, with rigors, muscular pains and vomiting, whilst jaundice usually appeared on the third day. Albuminuria, epistaxis, internal hæmorrhages, and petechiae were common symptoms, though hæmaturia was rare. The symptoms disappeared quite gradually, and there was often a secondary rise of temperature during the third week.

In the latter of these two epidemics described by Matthias as having occurred among the South African troops, the course of the fever much more closely approximated that which has already been given for Weil's Disease. The onset was acute, the fever remained high for eight to twelve days; whilst, in a few cases, there were relapses. No deaths were recorded.

How far these various epidemics represent different infective fevers, or how far they spring from a common stock, it is at present impossible to say, and the only object of the present paper is to record a somewhat similar epidemic with some of the problems which it has raised.

The epidemic in question occurred during the spring and summer months of the present year in the city of Tai-yuen-fu. This city is situated in 37° 55′ N. Lat., where the various diseases of tropical China, such as malaria and the like, are almost or quite unknown. The epidemic was mostly confined to one quarter of the city, where extensive digging operations were being carried on in connection with the repair of the main streets, and, in fact, most of the patients appear to have been labourers employed on this work. There are some people who maintain that such upturning of the soil is frequently the signal for an outburst of fever, but how far this is a case of *post hoc*, and how far of *propter hoc*, one cannot of course speak. Being mostly confined to men of this class, the age incidence naturally corresponded fairly closely with that which is given for Weil's Disease, though we did not hear of any butchers being attacked!

Unfortunately our opportunities of studying the epidemic were seriously limited by the fact that the reputation of the foreign doctor in these parts does not extend very far in the case of diseases which are non-surgical, so that only a very small proportion of the total number of patients attacked came under the care of Dr. Broomhall and myself; the remainder either consulting their own Chinese doctors, or nobody at all. It is therefore impossible to attempt anything like a complete description of the condition.

So far as could be judged from the few cases in which we ourselves saw the fever spread, the incubation period seemed to be from seven to fourteen days; the onset of the disease being an acute one, characterized

by high fever and severe headache, often associated with muscular pains in the back and legs. Jaundice appeared on the third to the sixth day, but was usually preceded by a marked injection of the conjunctival vessels, which proved a most valuable diagnostic sign. The liver was invariably tender, though not as a rule enlarged, whilst the spleen was commonly increased in size. Some of the patients had a slight cough which, however, soon passed off. No gastro-intestinal symptoms were present; the patients all being constipated, whilst the tongue remained uniformly moist, though somewhat coated. No albuminuria was found in the few cases that we tested. In two cases in which an examination of the urine was made for the presence of leucine and tyrosine, the result was negative in one, whilst in the other the crystals were not sufficiently definite to be diagnosed with certainty. No blood-changes were found in the patients examined.

But by far the most prominent and important symptom in each case was toxæmia evidenced not merely by the soft, "toxic" pulse and general disability, but also by the profound effect which it influenced in some instances upon the nervous system. As will be noticed by a reference to the cases described below, this produced serious, and even fatal, cerebral symptoms in some patients, the extreme headache going on to signs of acute meningitis, succeeded in turn by coma, Cheyne-Stokes breathing, and death. Even in those cases which recovered, convalescence was protracted by an amount of debility out of all proportion to the length of the actual attack or the severity of the initial symptoms, and apparently only to be accounted for by the intensity of the toxæmia.

Another very definite characteristic of this epidemic was the crisis which occurred with almost unfailing regularity about the seventh day. In some cases it was delayed until the eighth, in others, of a somewhat milder nature, it took place on the sixth, or even as early as the fifth, but in every case it was present, the temperature dropping rapidly to subnormal on the one hand, in such cases as recovered, or, on the other hand, the symptoms becoming more and more acute and the disease terminating in death. No secondary fever occurred in the few cases we had an opportunity of watching.

Such appeared to be the typical course of this fever, so far as we were able to observe it, but whilst stating this, there is a most important additional fact which needs to be recorded, and which may, or may not, have a most important bearing on the subject. At the very time when this epidemic was at its height in the city, there were also present numerous instances of an infective fever which presented marked points

of similarity with the above, and, at the same time, equally well marked differences. This again was a seven-day fever, commencing with an acute onset characterized by high fever and severe headache, often associated with muscular pains in the back and limbs. Here also there was frequently (though not always) a suffusion of the eyes, and epistaxis was a fairly common symptom, whilst the amount of toxæmia was fairly intense.

But the marks of differentiation were almost, or quite, as clearly defined as the points of similarity. In not one of these cases was jaundice present, nor did any of them develop any cerebral symptoms, whilst in every case there were well-marked relapses; the first usually occurring at an interval of about a week and lasting five or six days, and the second, or third (where present) after still smaller spaces of time and of an even less severe nature.

In each case therefore we have to deal with a seven-day fever, with similar onset and initial symptoms, but whereas, in the first variety, we have an additional factor presented in the form of jaundice (and even cerebral symptoms in some instances), from which the second variety is entirely free, the latter in its turn possesses its own peculiar characteristic in the presence of these definite relapses.

It will be obvious to all readers that this latter form of fever is almost, or quite, identical in its clinical course with that which is usually described as "relapsing fever," and our only reason for not definitely diagnosing it as such lies in the fact that in those cases where a blood examination was made we failed to find the spirillum of Obermeier. If, however, this was merely due to insufficient examination or unskilful methods, and these cases were in truth cases of relapsing fever, an interesting problem is at once raised. According to the descriptions of that fever given in Osler's System of Medicine and Quain's Dictionary, jaundice is a fairly common accompaniment, whilst both authorities state that during epidemics there may be cases in which there are no relapses. The question therefore at once suggests itself: Are these cases of toxæmic jaundice also to be considered as sporadic forms of relapsing fever? Or are they in some way related in origin to that fever?

On the other hand, arguing from the fact that the spirillum of Obermeier was not found in any of the cases examined, although searched for carefully at the height of the fever, another problem may be presented. Are these two forms of seven-day fever to be regarded as one disease (quite distinct from relapsing fever) in which jaundice may or may not play a part, and in which relapses may or may not occur? It might perhaps be suggested, in favour of this theory, that

the cases in which jaundice did not occur, represented the milder form, whilst in the more severe variety the occurrence of cerebral symptoms was to be ascribed to the more intense toxæmia. But this suggestion is not quite borne out by the facts of the case. It is certainly true that in the second group described above—that in which jaundice was absent, but in which relapses occurred—none of the patients ever gave rise to grave anxiety, and all of them recovered. But the converse does not hold good, for the first group of cases, those in which jaundice was present, did not by any means all prove serious, and some of them followed a more or less mild course.

There must be many members of our Association who have had opportunities of watching epidemics of a similar nature in China, and whose observations are probably far more complete than those briefly given in this paper. Could their experiences be recorded, they should prove of considerable value to us all, and it would be interesting to know whether in other parts there has appeared to be a similar connection between the two forms of fever here described.

The following is a short summary of a few of the typical cases in the recent epidemic:—

Case I.—U Tien-yung, aged 24, admitted to hospital on January 13th, with injury to elbow. On January 17th, complained of headache, fever and slight jaundice. No other symptoms.

The jaundice cleared up in four days, but the headache and pyrexia persisted and he developed a cough. On January 22nd he discharged himself from hospital against advice, but returned next day, owing to his "weakness." The temperature was still raised and patient complaining of headache.

On the following morning (January 24th), the headache was said to be intense, and in the course of the day grew worse, in spite of treatment. By the afternoon he was drowsy, but this soon gave place to symptom of acute meningitis, with raving delirium. This continued until 10 p.m., when it was succeeded by coma and Cheyne-Stokes breathing until death took place.

Case II.—San Ho, aged 30. Slept on same k'ang in hospital as case I. On January 27th, patient had high fever, severe headache, and injection of conjunctival vessels. About two days later jaundice appeared. No rash No enlargement of liver or spleen. Patient extremely weak.

Headache and jaundice persisted, with gradual rise of temperature, which reached 105.6 on the night of February 1st, patient being delirious. On the following morning the crisis occurred, temperature dropping to 95.7. No further symptoms appeared, but patient was extremely weak for two or three months.

Case III.—Gao Swan-swan, aged 16. First seen on March 18th, complaining of having had a shivering fit four days previously, with severe headache and fever. Pains also in back of neck. Had had jaundice for two days (?). Also slight cough. Temperature 103. Full pulse. Deeply jaundiced and with suffused eyes. Constipated, liver not enlarged, but tender. Spleen enlarged. No rash.

March 19th.—Temperature 102 2. Headache slightly better, but still has stiffness (?) of neck muscles. Sweating freely. Liver and spleen as before. Bowels open after aperient, and some round worms passed.

March 20th.—Temperature 101.2. Pulse much softer and toxæmia more intense. Patient almost in typhoid state. Only understands when shouted at. Respirations quite easy; but some rhonchi in lungs Expectoration viscid. Suspicious crystals in urine, very like leucine balls. No tyrosine crystals found.

March 21st —Deep unconsciousness all day. Cheyne-Stokes breathing later. Died in afternoon.

Cases IV-VI.—Lao Han, aged 55 (?). April 14th. Has been ill three or four days with fever and extreme debility. Slight amount of jaundice present, with tenderness over liver. Symptoms remained almost unchanged until the seventh day, when the temperature dropped to normal. No signs of cerebral irritation. Patient unable to walk for nearly two months, owing to debility.

On May 3rd, a second occupant of this home developed the same fever, and he was followed by a third on May 16th. In each case jaundice was present; in the former on the fourth day, in the latter not until the sixth. Temperature dropped to normal on the fifth and eighth days respectively. Their symptoms and signs corresponded closely with those described above. Both recovered after a protracted convalescence.

Case VII.—Tsao, aged 25. First seen on April 26th, when he had been ill for seven days. Headache and jaundice from first day; also cough, with thick expectoration Delirious five days. Epistaxis yesterday. Said to be passing dark motions. Ecchymosed, jaundiced conjunctivæ. Large pupils, reacting freely. Deep delirium, with spastic movements and apparent tenderness over muscles of back of neck. K. J.'s free—not increased. Moist râles in lungs. Tenderness over liver. Spleen not felt. Died the same night.

Case VIII.—Yü, aged 29.—On May 14th, taken ill with headache, pains in legs, fever and vomiting. The following day had temperature of 104°, with quick soft pulse. Moist, furred tongue. No other signs.

May 17th.—Temperature and pulse as before. Slight cough. No rash. No jaundice. Liver and spleen normal.

May 18th.—Epistaxis to-day. Pulse getting softer, temperature remaining unchanged.

May 19th.—Eyes suffused in early part of day, whilst later there was definite jaundice. Liver tender. Spleen enlarged. Headache more severe and toxæmia deeper.

May 20th.—Temperature 102 5, pulse 120, very soft. Patient much worse, deeply unconscious all day, becoming almost comatose, and towards night with slow stertorous breathing, slightly rhythmical and approaching Cheyne-Stokes respirations in type. Deeply jaundiced and considerable enlargement of spleen, but no other abdominal signs. Patient fed with teaspoon all day. Frequent hypodermic injections of camphor and of various cardiac stimulants.

May 21st —Crisis in early hours of morning, after patient had appeared moribund and pulseless. Temperature subnormal; pulse during day extremely soft and weak and intermittent. Considerable sweating. Slow return to consciousness.

From this date patient very slowly regained strength, but was unable to move about for two months. During this time he developed an abscess in the right thigh, and also a paresis of the intestinal muscles, amounting almost to chronic intestinal obstruction. These complications doubtless helped to retard his progress, but for many weeks his extraordinary debility, and loss of flesh, bore eloquent testimony to the intensity of the toxæmia he had received.

AMBULANCE SUITED TO NATIVE LIFE IN CHINA.

AN AMBULANCE FOR CARRYING PATIENTS, SUITED TO THE CONDITIONS OF CHINESE LIFE.*

By H. W. BOONE, M.D., Shanghai.

For some time we have needed a conveyance for accident cases and for cases of serious illness. The rich General Hospital for foreigners has a large four-wheel ambulance which requires a horse and harness and a driver. It is a very costly affair. Then by sending to England we could get a smaller wheeled vehicle to be pushed by a man walking between the shafts; cost about $100.00.

This did not suit me, because I wanted a conveyance that would do in Shanghai and at the same time could be used in the Chinese towns and villages and on the country roads where a wheeled vehicle could not go. Something *light* and *strong*, weather proof, and that the Chinese would know how to manage; that could be carried slung on a bamboo and supported on the shoulders of two men. A bamboo and bearers can be found anywhere in China and they can be had at short notice.

The conveyance, in order to be popular and in demand throughout China, should be neat, *strong* and *light*, and not too expensive; for I hoped that it would come into general use, and that it would be adopted in the Chinese army for carrying wounded men.

After some thought on the subject, I have had made an ambulance which I wish to show to the members of the Society. The lower part is a frame which resembles an ordinary Chinese bed-bottom with the cocoa fibre netting across it. The frame is of hard wood, 6 ft. long, 25 inches wide. Underneath it there are four wooden pieces, 2 inches square and 4¼ inches long, strongly screwed on to the frame, two at 1 foot from the head end, two at 1 foot from the foot end. The frame rests on these four feet clear of the ground, and these pieces project 2 inches beyond the sides of the frame, so that the ropes by which it is slung, may have a firm support and cannot slip. On this bed frame rests an upper frame of hard wood with no fibre netting in it. Four round pegs project upwards from the lower frame and fit into four holes in the upper frame to hold it steadily in position. A tent-shaped frame going up to an apex eighteen inches above the bed, supports a strong waterproof canvas cover of enamelled cloth, brown like the wood work, which is covered with Ningpo varnish. To ensure free ventilation the canvas cloth at the head end only goes up 9 inches, the upper space is covered with perforated zinc. The entire foot end is covered with perforated zinc. This lets in both air and

* Read before the Shanghai Branch, February, 1908.

light, but it does keep out rain. We find that two good coolies can carry a man in this ambulance at the rate of four miles an hour without any jolting; really the patient is less shaken than he would be in a wheeled vehicle.

The frame can be carried into any room in a Chinese house. An easy way to carry a patient down a steep and narrow Chinese staircase is to put him on a chair, tilt him backwards, carry him down the stairs and then lay him on the frame work.

The frame is narrow and can be taken upstairs, the patient bound to the frame by his long sash and then carried down the stairs. It is easier to carry him down on the chair.

All the wood work of the ambulance is neatly rounded off, so as not to hurt the fingers when handling it and to prevent chipping off of the wood.

We fold a blanket three folds and lay it on the bed frame. When necessary we spread a waterproof sheet over the blanket.

This ambulance is neat, very strong and serviceable, affords ample protection from the weather and is of a kind that the Chinese readily understand and know how to manage. Its cost is $10.50 Mex.

METAZOAN PARASITES IN TROPICAL PATHOLOGY.

(Review by R. T. BOOTH, M.B., B.Ch.)

At the December Meeting of the Society of Tropical Medicine and Hygiene, London, Dr. L. W. Sambon, Lecturer to the London School of Tropical Medicine, read a most interesting and instructive paper on the "Part played by Metazoan Parasites in Tropical Pathology." He first briefly sketched what was known by the ancients as regards the role of entozoa in the causation of disease. Endemic anæmia was ascribed 1,550 years B. C. to an intestinal worm. And from the papyrus it seems certain that the site and nature of the worm was known. There is a prescription of a remedy for a patient, "who has in his abdomen worms which are produced by the āaā disease."

Aristotle mentions the bladder worm of the hog. The "fiery" serpent which plagued the Israelites in the wilderness was no other than *Dracunculus Mediniensis*, the "guinea" worm. The description of this worm given by the great Byzantine surgeon, Paul of Aegina, might have been written at the present day. Sarcoptes scabiei was known to the ancients from remotest antiquity. In spite of descriptions of this parasite,

which appeared from time to time from Aristotle onward, its existence as a cause of *itch* was utterly ignored by physicians, who continued to explain the disease by strange humoral theories up to 1834, when a Corsican student, named Francesco Reuuccio, hearing the existence of the mite denied at the St. Louis Hospital, Paris, proposed to show it forthwith, and extracted it from the epidermis of a patient with a point of a ueedle as he had seen the peasaut women of his couutry do so many a time.

Professor Sambon went on to say that within recent years the llst of metazoau parasites affecting man had been considerably enlargedi and it was of the utmost importance to notice that some of the species which hitherto had escaped notice were widely distributed, extremely frequent, and highly pathogenic. He then briefly reviewed the history of the Auchylostomum Duodenale from the time of discovery by Dubini in 1838 in the duodenum of a peasant woman at the Osypedale Maggiora in Milau. In 185r Griesinger showed that Dubini's worm was the cause of Egyptian Chlorosis, and later Wucherer proved that the Brazilian disease called 'Oppilatio' was likewise an anchylostomiasis. In 1879 the disease was recognised in Calcutta, but the disease had been no doubt knowu to the natives from time immemorial. Harita in his work called the '*Harita samhita*,' which was believed to be older than *Sushruta*, spoke of anæmia uuder the uame of *Panduoga* and stated that it was sometimes caused by swallowing clay. Geophagism, as is well known, occurs almost iuvariably in associatiou with anchylostomiasis. The world wide distributiou of endemic anæmia indicated the possibility of more than one type of disease in the various regious. Iu 1888 it was shown that the Brazilian worm was not provided with hooked teeth as described by European authors, and Stiles in 1902 showed that in the Southern States endemic anæmia was due to a new species of the closely allied genus *Necator*, for which he proposed the name *Americanus*, believing it to be special to the American Continent. Since then, however, Looss found it in the pigmies in Central Africa, and suggests that in all probability it was taken to America at the time of the slave trade. Leiper has shown too that it is widely distributed on the Gold Coast and in material received from Uganda, Rhodesia, India, Burmah, and Ceylou.

In 1905 Raillet aud Henry described auother uew *strongyloid* which might also be an important agent in the causation of tropical anæmia. The parasite belonged to the geuus *Triodontophorus* established by Looss iu 1901 to include two new *sclerostomidæ* of the horse, characterised mainly by the preseuce of three peculiar teeth arising from the floor

of the oral capsule. In 1905 also Raillet and Henry named and described a new parasite—*Oesophagostomum brumpti*—belonging to the subfamily *Sclerostominæ*. It was discovered by Brumpt post mortem in cyst-like nodules in the walls of the cæcum and colon of a negro, thirty years of age.

With regard to the Schistostomidæ for a long time only one species was known to exist in man, viz., the *Schistostomum Hæmatobium*, previously known as *Bilharzia* after the name of the German physician who had discovered it in Egypt in 1851 and who had proved it to be the cause of *endemic hæmaturia*. In 1904 Katsurado discovered a new species in Japan and called it Schist. Jap. Shortly after Catto found the same parasite in sections of the mesocolon of a Chinaman from the province of Fukien, who had died of cholera at Singapore. So far it has only been found in Chinese and Japanese, but very probably it is of wide distribution. It gives rise to an endemic disease characterised by enlargement of the liver and spleen, cachexia, and ascites. It does not affect the bladder; its ova being excreted by the intestine. Professor Sambon then went on to describe a third species which he established last summer, 1906. He had named it Schist. Mansoui in honour of Sir Patrick Manson, who had suggested the possibility of its specificity as early as 1903, when he discovered numerous Schist. eggs bearing a *lateral* spine in the stools of a patient who had long resided in Antigua and other West Indian Islands. Repeated examinations of the urine in this case had been negative, and the patient stated that he never at any time suffered from hæmaturia. Dr. Sambon said that he was unable to give either description or measurements of the parent worms, as the material at his disposal was very scanty and badly preserved. His determination was based chiefly, though not solely, on the characteristics of the ovum, which differed greatly from that of S. Haem. not only in the position of the spine, but also in the shape and size both of the spine and of the body of the egg. All the *Schistostomidæ* so far known, both in man and cattle, were very much alike in general appearance; the only striking and characteristic difference was that of their ova, which differed markedly in each species. In *Schist. Hæmatobium* the eggs were more or less lanceolate and provided with a short terminal spine; in *Schistost. Bovis* they were spindle-shaped and provided with a short terminal heart-shaped spine; in *Schistost. Japonicum* they were ovoid and had no spine; in *Schistost. Mansoni* they were oval and provided with a stout lateral spine. To zoologists the characteristics of the ova should suffice for the determination of a new species. Other species in higher groups of the animal kingdom as, for example, an

American ostrich *(Rhea)*, had been established solely on the characters of their eggs. But there were other important facts in support of the new species, which would, no doubt, prove more convincing both to physicians and naturalists, namely, the peculiar geographical distribution, the different anatomical habitat, and the specific pathogenic action of *S. Mansoni*. In Egypt both *S. Hæmatobium* and *S. Mansoni* appeared side by side, but the former was much more prevalent, and was certainly more in evidence on account of the hæmaturia it produced. That was probably the reason why the two forms had been confounded and the scarce lateral-spined ova looked upon as abnormal or distorted. It is necessary to go over a wider field to realise that the differently shaped eggs represented different species. Thus in Cape Colony *S. Hæmatobium* seems to be the only one present. Harley, Brock and others working in this district have stated in their articles on the subject that they had never encountered eggs with the lateral spine. In other places, as in the West Indies, *S. Mansoni* was probably the only species, endemic hæmaturia was unknown, and the parasite had escaped observation until quite recently when a systematic examination of stools for detection of anchylostomum ova had made them suddenly aware of its extreme prevaleuce.

Further researches might reveal the existence in man of still other species which had so far escaped observation. Indeed Christophers and Stephens had found in the urine of a Madras native suffering from hæmaturia schistostomum eggs differing from those of *S. Hæmatobium* by their greater length and peculiar spindle shape.

With regard to *Opisthorcis sinensis*, the Asiatic liver fluke, Looss has shown that it should be recovered from the genus *Opisthorcis* and placed in a new genus, for which he proposed the name of *Clonorchis*. At the same time he pointed out that under the title *sinensis* two separate species were confounded, viz., *Clonorchis sin.*, the original *Distomum sin.* of McConnell and Cobbold, and *Clonorchis endemicus* the *Distoma hepatis endemicum sive perniciosum* of Baelz. These two species could not be distinguished by any structural characters, save slight differences in the size of the body and the ratio of the suckers, but as Baelz had pointed out in 1883 the larger form *C. sinensis*, usually present in small numbers, was comparatively harmless, whilst the smaller one, *C. endemicus*, always present in large numbers, was decidedly harmful. Both species occurred in China and Japan, but their relative prevalence seemed to vary greatly in different districts.

A new trematode of man has been described by Conyngham in 1904 as *Amphistomum watsoni*. In the following year Shipley de-

scribed it more minutely and assigned it to the genus *Cladorcis*. It had been found by Watson in the duodenum and upper part of the jejunum of a negro patient in German West Africa.

Within recent years several new *Cestodes* have been described. Thus in 1900 von Linstow described a *Tænia africana* from natives of Langenburg in German East Africa, in 1901 *Davainea asiatica* was passed by a man in Aschabad, Asiatic Russia, and in 1902 a *Tænia hominis* was found also in a man from the same place. In 1907 Dr. Sambon himself described a *Sparganum*, which had been forwarded to him for determination. It had been removed from an abscess in the thigh of a Masai in German East Africa by a medical missionary, Dr. Baxter. Dr. Sambon called it *Sparganum baxteri*, although it was impossible to distinguish it from the one found by Manson in 1882 in Amoy.

In the second part of his paper Dr. Sambon particularly drew attention to the migrations of certain helminths in their larval or immature stages before they reached their anatomical habitats in which they were usually found, because he believed a correct and full knowledge of such migrations might explain much that was now still obscure in the pathogeny of certain species. Until quite recently the route followed by the majority of intestinal parasites was supposed to be a direct one. The eggs of the parasite being swallowed by the host reached the intestine with water or food, and hatched in the part most convenient for their development. Likewise maggots appearing beneath the skin were supposed to have been laid there by the parent fly itself. He then gave a few examples to show that the true mode of entrance might be very different.

In the first place he mentioned the "ox warble fly," *Hypoderma bovis*. The life history of this fly has been entirely misunderstood until recent years. At one time it was believed that the fly punctured the skin and laid its eggs beneath by means of its ovipositor. On careful examination it was found that the structure of the ovipositor excluded the possibility of puncture, and that the eggs were merely deposited on the hairs of the skin. Thereupon it was thought that the larvæ, after hatching, penetrated the skin through the hair follicles. Now, however, it is known that the fly lays its eggs on the legs of the cattle, especially just above the hoof. The animals by licking conveyed them into the mouth. The larvae then escape from their egg shells and by means of their strong spines penetrate the walls of the œsophagus. They then moult and become smooth, and for several months wander through the connective tissues of the host, or migrate into the spinal

canal, and ultimately reach the point of their final development beneath the skin along the back of the animal. The larvæ then moult again become more spiny and bore a hole through the skin, placing their anal spirable near the orifice in order to get air. The larvæ then develop rapidly, living upon the pus and bloody serum produced by the irration of the spiny skin. Finally they moult again and force themselves out through the orifice, which they enlarge and drop to the ground to pupate.

As an example of the history of an intestinal worm Dr. Sambon took anchylostomum duodenale. Until quite recently it was believed that the larva was swallowed with water, food, or possibly even sand, and so passed directly into the duodenum. Looss suggested a second mode of infection, and proved it on himself that the larvæ can penetrate through the skin, enter the blood stream and finally reach the small intestine. According to Looss the larvæ were carried by the blood current into the right side of the heart and from there into the lungs. There they left the vessels and passed into the air follicles, crept along the bronchi and trachea passed over the dorsal margin of the larynx and down the œsophagus to the stomach and finally reached the duodenum. Dr. Sambon thinks, however, that the larvæ could certainly reach the small intestine by a more direct route, and also a safer one. In various species of œsophagostomum and in other sclerostomum which inhabit the intestine when fully mature for the purpose of fertilisation and oviposition, the immature forms, before entering the lumen of the gut, appear in small cysts beneath the mucosa of the intestine. It may be that the ankylostomum duodenale larva follows some such more direct route. The whole matter is, however, open to conjecture.

With regard to *Ascaris lumbr.* the general belief was that it reached the small intestine directly through the stomach, and, indeed immature forms of this worm have been passed by man. Dr. Sambon, however, pointed out that the larva of *A. lumbr.*, like the larvæ of some other species of *Ascaris*, is provided with a perforating tooth which would subserve the purpose of entering in some other way through the tissues. Although it is generally believed that the development of this worm occurs entirely within the one host such competent observers as Leuckart, Brown, and von Linstow suggest that the larval stage might be spent in an intermediate host.

In the concluding part of his paper Dr. Sambon touched on the part that such metazoa might take in transmission of secoudary infections. The subject, in his opinion, is pregnant with possibilities. Therefore it was necessary to encourage the study of helminthology in every possible way.

GO KAN JIU MU. 割肝救母.

By J. H. McCartney, M.D., Chungking.

The filial piety of the Chinese is often lauded by those who know little or nothing of the Chinese. But the longer I live among them and the better I know them the less inclined I am to believe that they are any more "filial" than the rest of us, and if they make any sacrifice for parents there is generally some superstitious idea connected with it. Generally it is the teaching of some book which leads to ignorance and superstition.

We have often met with women who have cut out pieces of their flesh in order that a stew could be made with which to restore to health a sick husband; or men who have cut off arms, fingers and toes in order to free themselves from some charge or get even with an enemy. These are all the teachings of superstition. But up to this year I had never met with a case where a person had attempted to excise her own liver that she might obtain a piece with which to make broth to restore a sick mother or mother-in-law. In both cases the idea originated from their reading some theatrical book, which book I have thus far been unable to obtain. This book claimed that liver obtained from a living person had special curative properties and that such an act was meritorious on the part of the person who had the nerve to do the operation on himself. I heard at least one wealthy gentleman (Chinese) commend the act and he even went so far as to say that he was going to give the woman some money.

The first case occurred in the practice of Dr. Assmy, of the German hospital. The doctor was called the next day after she had opened her abdomen. He found the abdomen sealed with burnt paper, which no doubt saved her life. Her attempt was successful, as she had made a cut high enough and over the left lobe of the liver, so that as soon as the abdomen was opened the liver bulged up into the wound and she was able to excise it without any of the abdominal contents protruding. As proof they showed the doctor the piece of liver, and there could be no doubt that it was actually accomplished. She made an uneventful recovery and was lauded to the skies by the Chinese for her filial act. The doctor said that the patient's mother also recovered after taking a few doses of quinine.

The second case occurred in my own practice about three months after the above. The patient was a young married woman, unusually strong and healthy, living in a city about sixty English miles from Chungking. Her mother-in-law was sick, and in order to show her love

she took a big vegetable knife and with one cut opened her abdomen, but not with the success of the first patient. The position of the cut was all right, that is, about one inch to the right of the medium line, but the penetration into the abdomen was too low to expose the liver. The consequence was that she struck intestine in place of liver, with the result that the intestine protruded. They became frightened, as the Chinese hold that the intestines are "mo po ta," and decided to bring her to Chungking for treatment. They called a Chinese doctor, who put one or two stitches in the wound with a coarse, cotton thread. They had presence of mind enough to tie a cotton cloth around the abdomen, which prevented any great amount of the intestines from coming out.

The accident occurred about nine o'clock and she did not reach the hospital until nine o'clock the next night. When she reached the hospital she was almost pulseless and presented anything but a promising condition. With the assistance of Dr. Mary Ketring, she was hastily prepared for operation by giving her gr. 1-60 strychnine and three ounces normal salt solution subcutaneously, together with hot water bottles. Examination showed a knuckle of transverse colon, mesocolon, and about one and a half feet of small intestine, protruding, all matted together with inflammatory material and covered with white cheesy flakes. The mesocolon had been perforated with the knife and bled freely when the cloth was removed.

As the colon presented the worst appearance and we did not think it advisable to resect both large and small bowel, we decided to clean the small bowel and resect the colon, which was done.

The operation took considerably over one hour and the patient was in better condition at its end than she was when taken into the hospital. The next morning there was still more improvement in the pulse, but as we could not give them any definite promise of her ultimate recovery they decided to take her back home, against our advice, giving as their reason for doing so that if she died they would not be able to take her dead body into the city and therefore would not be able to pay her the respect due her for her act of devotion.

She lived to reach home and was reported to have eaten food. She lived forty-eight hours after operation. How long she might have lived if she had not been taken back it is difficult to say. But no doubt she would have lived much longer and it is not at all improbable that she would have recovered. The merit she obtained cost her her life, but no doubt her city pays honor to her memory. It would be interesting to hear if any other physicians have met with similar cases in China and to know if it is of frequent occurrence.

THE EVANGELISTIC SIDE OF MEDICAL MISSIONS.

By ROBERT C. BEEBE, M.D., Nanking.

Every medical missionary recognizes the fact that the purpose back of his coming to the field, the purpose of those who contribute to his society and make his presence and work here possible, is the great desire to extend Christ's kingdom, to turn people from darkness unto light, from the power of Satan unto God, that they may find forgiveness for their sins and an inheritance among all those who are sanctified through faith in the Lord Jesus Christ. Moreover he is compelled to confront the fact that the daily demands upon his time and strength in professional duties and detail management of a large work leave him little opportunity for direct and aggressive evangelistic effort.

No doubt there are various degrees of ability and zeal among the large body of medical missionaries in China, but I presume no one would be satisfied with a work that had no spiritual results or would be willing to spend his life in this country with only a moderate opportunity of advancing Christ's kingdom. The medical missionary needs no defence of his spirit, devotion, or zeal. To his Lord has he devoted his life. To his Lord does he give his service, and to his Lord, who went about doing good, does he look for example and inspiration. Surely no field is so attractive or promising as that made fruitful by the medical missionary. I sometimes think that we ourselves do not fully realize the power and opportunity of our work for good and that its possibilities are not thoroughly appreciated by the missionary body in general. Consider the fact that our dispensaries have larger daily audiences to preach to than have most street chapels and that each individual has come, expecting a kindly personal service, and it must be conceded that the opportunity for presenting the Gospel is unique. It is sometimes objected that the patients are too intent on getting relief from their physical ills to make them good listeners to any presentation of the Gospel, but is this really so? Many of them may not be able or inclined to listen to long or uninteresting discourses, but the fact remains that here are many who from pain or disease necessarily are brought to confront the fact of the uncertainty of life. They begin to realize the possibility of their slipping away beyond the enjoyment and benefits of life, money and friends. At such a time they come in hope to the foreign missionary who stretches out a helping hand. Surely a word of wisdom has the best of chances under such circumstances to find lodgement in the soul. We, of course, know that very

often it does not find lodgment, but so has it ever been since the great Physician first began to heal and to teach.

Then the wards of our hospitals have an advantage unexcelled for evangelistic work. Kindness, care and real help are daily combining to gain the confidence and gratitude of our patients. Here we have an opportunity to exemplify the teaching of Christ, to give force to his message, and to open hearts to the love that constrains us to give ourselves for them. The patients are under our influence for a long time, affording a better opportunity for evangelistic effort with line upon line, precept upon precept, and they have an opportunity to study and learn the essential claims of the Gospel. The medical missionary sees and appreciates these opportunities and deeply realizes his inability, if unaided, to conserve and make the most of his work for Christ. This makes the evangelistic question an important and interesting one to him.

For a general propaganda by public talks and addresses, the dispensary affords a daily audience. Here is an opportunity, say of a good half hour each day before patients are seen by the physician. Those who cannot read can understand a plain talk on religious themes and all can be at least invited to investigate the claims of Christianity. I have always made it a custom to include with the registration ticket some Christian literature. I am aware that many of our patients cannot read, but the printed matter is taken away and perhaps read by others. Not all seed sown for the kingdom falls on good ground, but we must sow broadcast, for we cannot always know which will bear fruit for the harvest. I consider it an important matter to make prominent, as is done by the preaching in the dispensary and by religious literature, that this philanthropic work is a feature of the Christian religion, to identify to the passing crowd of patients, every day, the service rendered to them with the spirit and work of Christ, whether they accept his claims or not.

A service of daily prayer for the in-patients gives an opportunity to present Christ, to say things to the patients that an ordinary conversation might not permit or give a place for. Those who will come to such a service, for I think it should be voluntary, express by this act a certain degree of readiness to hear the Gospel.

There should be a reading room in connection with the hospital where an evangelist can be found every day and where those who wish to read can find books, tracts and papers. These can be loaned or sold to patients, and here at some time of the day will be an opportunity for quiet personal conferences between the native evangelist and inquirers.

Most patients, who are able, are glad to attend services on Sunday, and the evenings during the week afford a fine opportunity for teaching

employees and those among the patients who are sufficiently interested and are able to attend such meetings.

Many of our patients come from more or less remote places and represent lines of communication and places connected with our location by travel or trade. To conserve the goodwill, the favor gained for the Gospel in these places, to water the seed sowu in the hearts of patients while in the hospital is an opportunity and a responsibility equally great.

To make the most of the religious opportunities presented to us during the week days, the evenings, the Sundays, in the dispensary and wards, the reading room, the chapel service, the homes and villages of our patients—yes, to even undertake to utilize them, requires more than the medical missionary, with his professional duties, can find strength or ability to compass. The ever recurring question is, "What shall I do?" One engaged in any work should be at peace with his environment and the medical missionary ought to be free from harassing care and an overloaded weight of responsibility if he would do any work efficiently. The medical work he and his trained assistants *must* do. The other members of the mission—lay and clerical—cannot take up that work. It is constantly pressing and cannot be evaded. But the evangelistic work they can assist in or direct. My conviction has grown with experience that more emphasis should be put upon the opportunities and urgency of the hospital work in its claims upon the evangelistic foreign missionary. A clerical missionary should be connected with every medical work to make the most of its evangelistic opportunities. There is too great an outlay in money and effort, too magnificent an opportunity gained to pass it by and open new work.

As medical missionaries recognizing the need and desiring the highest good for this people, we should at every opportunity present the need, argue the claims, and work for the fullest evangelistic service among our patients. Every medical missionary can bring to his dispensary and hospital a work large enough for himself and another foreign missionary at least.

I would repeat then that there should be a clerical missionary connected with every hospital, and without one the evaugelistic opportunities cannot be adequately couserved. They cannot be conserved as fully as so large au effort and expenditure by a missionary society should demand.

But all I have said in regard to the need of a clerical missionary's help in medical mission work does not imply that the doctor has no other claims upon him than the professional side of his medical work.

The whole spirit and atmosphere of the hospital will largely depend upon him. This makes up the *life* of the institution. It matters not how good sermons or talks are given to the patients, how wise advice or urgeut invitations, if the daily atmosphere is not permeated with the spirit of Christ, if the daily life does not reveal him in some measure, the rest will be largely wasted. If there are acts speaking louder than words, the words, be they ever so good, will not be heard.

Christ threw a very clear light on the pathway He wishes us to tread when He said : "Inasmuch as ye have done it unto one of the least of these my brethren ye have done it uuto me." That makes it possible for us in our professional work to preach sermons, offer worship, and render service most acceptable to God.

If we see and feel in all our routine duties, in every service we have to render to the sick and suffering, a direct and loving service to Christ, it will not only ennoble and exalt our own souls but give to our hospitals and dispensaries such a spirit of loving persuasiveness that the Gospel will be preached effectively, the religious services will be blessed with results, and our own words of testimony and entreaty, when we are able to give them, will find hearts ready to consider them.

I couut this a vital matter in relation to the evangelistic phase of medical missions. We *must* have the mind and the spirit that was in Christ Jesus. This must extend as far as possible to all the helpers. The coolies should feel that they are part of a Christ-inspired institution. The standard for them should be his life and spirit. An attempt to approach it will count largely in the best results.

There is no rare and wonderful device for evangelistic results. Each place has its own problems. Each man has his own gifts and limitations. All of us should be able to say with Paul : "God called me by His grace to reveal His Son in me that I might preach Him among the heathen," and each of us should be able to reveal daily to our patients the Christ abiding in us and thereby most effectually preach him to those who come under our care.

O Master, let me walk with thee,
In lowly paths of service free.
Teach me thy secret, help me bear
The strain of toil, the fret of care.

Teach me thy patience—still with thee
In closer, dearer company,
In work that keeps faith fresh and strong,
In trust that triumphs over wrong.

In hope that sends a shining ray
Far down the future's broad'ning way,
In peace that only thou canst give,
With thee, O Master, let me live.

Reports of Customs Surgeons.

MENGTSZ MEDICAL REPORT.

LES INDIGENES ET LA MÉDECINE EUROPÉENNE, AU YUNNAN.
PAR LE DR. G. BARBÉZIEUX, MÉDECIN DE L'HÔPITAL DE MONGTZÉ.

Les Chinois, si réfractaires encore, au moins dans les provinces éloigneés de la mer, comme le Yunnan, aux idées et aux choses de l'Occident, commencent, cependant, grâce à un contact plus intime avec les Européens, à recourir à notre expérience et se montrent de plus en plus empressés à s'assimiler nos méthodes et nos procédés scientifiques.

Le Yunnan, à peine ouvert aux Européens, réputé, non sans raison, l'une des plus ignorantes provinces de l'Empire, s'ouvre lui-même, peu à peu, à la civilisation et l'on est frappé des progrès accomplis, au cours de ces dernières années, depuis, surtout, la venue des agents de la Société de construction du chemin de fer, qui reliera bientôt Hanoi à Yunnan—Sen, par Laokay et Mongtzé.

Au point de vue médical,—le seul qui nous intéresse dans cette note,—nous voyons, de plus en plus, la clientèle chinoise envahir nos hôpitaux et nos cliniques, délaisser le médecin indigène, reconnu ignorant, et solliciter les conseils et les soins du médecin étranger.

A Yunnan—Sen, où notre distingué confrère Delay a laissé le meilleur Souvenir, l'activité du *trop petit* hôpital consulaire français est considérable et nous avons pu voir, au cours d'un récent voyage, à la consultation du Dr. Ayrand, de nombreux malades se remettre avec confiance entre les mains du médecin français, se prêter à de grandes opérations chirurgicales, comme la cure radicale de la hernie, du gôitre, des resections, des amputations, etc. Les Chinois ne font aucune difficulté pour reconnâitre notre supériorité sur leurs médecins, sorciérs, empiriqnes et rebouteux.

A la vérité, cette reconnaissance ne va pas sans quelque jalousie, sans quelque envie et, stimulés par l'amour-propre, les Chiuois du Yuunau se mettent à construire des hôpitaux, pour l'établissement desquels les notables des villes sont fortement mis à contributiou. Il y a un hôpital chiuois à Yunnan—Sen et l'on s'occupe d'en créer un autre à Mongtzé.

Mème, pour ce dernier, le médeciu du Consulate de France a été discrètement cousulté et, il y a quelques jours à peiue, le sous-préfet

de la ville lui demandait si, le cas échéant, il consentirait à aider ses confrères chinois de ses conseils et de ses lumières. Le Taotaï et le Préfet viennent, de temps à autre, visiter l'hôpital français de Mongtzé, s'intéressent à ce qu'on y fait et témoignent quelque satisfaction des soins donnés à leurs malades.

Il est vrai que l'organisation de l'assistance publique, l'établissment d'hôpitaux, d'asiles, ne constituent pas des idées nouvelles, en Chine. Nous sommes, ici, dans le pays où toutes les traditions, toutes les idées sont représentées; mais, cette représentation est nominale et assistance publique, hôpitaux, établissements de charité sont loin d'être des réalités.

Quoi qu'il soit, notre science médicale intéresse les Chinois, surtout notre thérapeutique. Ils voient, tous les jours, les effets incontestables de quelques uns de nos médicaments et leurs médecins et leurs pharmaciens remplaceraient volontiers les remèdes chinois, si compliqués, si difficiles à prendre, par nos "drogues" européennes, s'ils connaissaient exactement l'usage de ces dernieres, s'ils pouvaient les prescrire, dans des cas bien déterminées. En effet, la médecine chinoise, tout empirique, ne connait guére que la symptomatologie des maladies et c'est contre le seul "symptôme" que se porte l'effort de l'empirique.

C'est donc une éducation à faire, mais intéressante, utile et pour laquelle nos Yunnanais paraissent déjà mûrs.

Depuis, tantôt, quatre années, à Mongtzé, plus de douze mille Chinois, tant à la Consultation journalière, à l'hôpital, en ville, que dans la famille même, ont reçu les soins du médecin français,—ce qui nous valut, au début, quelque mauvaise humeur d'un confrère Chinois, dont toute la pharmacopée tenait dans un petit flacon mystérieux, portant cette simple et très modeste étiquette: " *Remède d'Immortalité!* . . . Depuis, les choses se sont arrangées, bien que notre confrère, plus routinier que d'autres, plus attaché à la tradition, ne soit pas encore pleinement convaincu de l'efficacité des remèdes européens, qui n'exigent ni mélanges savants, ni combinaisons compliquées, ni incantations.

HOSPITALISATION DES INDIGÈNES.

En principe, le Chinois du Yunnan est réfractaire a l'hospitalisation. Il vient volontiers réclamer les soins du médecin étranger, chercher des remédes, mais il répugne à l'idée d'entrer à l'hôpital, où il est astreint à un régime sévère, à une discipline effective, où, enfin, il n'a pas son opium. Il ne vient donc chez nous que contraint et forcé, quand il a essayé tous les traitements, épuisé toutes ses ressources. En réalité, depuis ces dernières années, les choses ont, déjà, bien changé et cette peur de l'hôpital, s'est singulièrement attenuee,

depuis, surtout, que les coolies, employés par la société de construction du Chemin de fer, sont évacués régulièrement sur les hôpitaux et les ambulances de la ligne.

C'est ainsi que, du mois de Janvier 1903 au mois de Septembre 1904 une centaine de Chinois ont été hospitalisés à l'hôpital de Mongtzé, fournissant, ensemble, un peu plus d'un millier de journées de présence. Le reste de la population indigente de l'hôpital est constitué par des annamites, venus du Tonkin en qualité de " boys " et restés sans place ; par des Européens, la plupart des Italiens, ou des Grecs, employés momentanément par la Société, les Entrepreneurs, ou les tâcherons du chemin de fer et que la maladie a réduits au chômage forcé et à la misère.

Chez les indigènes hospitalisés, ce sont les plaies, les affections chirurgicales qui forment le principal de la statistique hospitalière. Les troubles du mois de Mai 1903 avaient peuplé l'hôpital de Mongtzé de soldats blessés et confiés à nos soins par les autorités mandarinales elles-mêmes.

La fièvre typhoïde, qui existe à Mongtzé à l'état endémique, nous a envoyé son contingeut de malades ; de même, le paludisme, qui, selon que je l'indiquais dans de précédents rapports, sévit dans notre région, en dépit de l'opinion professée par la plupart des voyageurs, qui jusqú à présent, n'ont fait que traverser le Yunnan au pas de course !

Les affections gastro-intestiuales, la dysentérie, la misère physiologique, si profoude à Mongtzé, la lèpre, entrent également pour une bonne part, dans le cadre des maladies traitées à l'hôpital, consulaire français.

C'est au commencement de la saison des pluies (mois de Mai) et aux approches de l'hiver (mois de Novembre) que les maladies, se montrent le plus fréquentes et le plus meurtrières.

Nous avons eu en outre, cette année, une légère epidémie de variole, qui a sévi principalement dans les faubourgs de Mengtze. Cette épidémie n'a duré que quelques semaines et n'a fait aucune victime parmi la colonie européenne. Les mesures prophylactiques, prises immédiatement, les vaccinations et revaccinatious ont rapidement enrayé la marche du fléau.

Nous coustatons toujours l'absence de la peste à Mongtzé. Cette ville, où de nombreuses épidémies de peste ont *éclaté* autrefois, passait poun être le *foyer* chinois de cette redoutable maladie. Depuis quatre années, je n'ai, pour ma part, constaté que deux cas de peste à Mongtzé ; encore, l'un de ces cas était-il importé du Koei-Tcheou. La peste paraît donc avoir disparu de la région. Cependaut, l'agglomér-

ation chinoise a augmenté et les conditions sociologiques ne se sont pas modifiées sensiblement. Les Yunnanais sont aussi pauvres, aussi ignorants, aussi sales et la ville de Mongtzé est le même cloaque qu'autrefois. En revanche, il semhle, depuis quelques anneés, que les couditions climatologiques se soient légèrement trans-formées : c'est, du moins, l'opinion de beaucoup de personnes qui hahitent la région depuis longtemps. Quoi qu'il en soit, la disparition de la peste—définitive, ou momeutanée, est un fait certain et qu'il était nécessaire d'indiquer.

OPENING OF THE YALE MISSION HOSPITAL, CHANGSHA, HUNAN.

DEAR DOCTOR :—You may he interested to know of tbe formal openiug of the Yale Mission Hospital in this place on Tuesday, March 24th. Our place is but a reuted Chinese house, remodelled, and we cannot claim to be in the same class as tbose of you who have modern sanitary hospitals, whose plans and diagrams every one is keen to get hold of. But in our present quarters there is accommodation for a few patients, and there is such a tremendous demand for the foreign methods of treatment that the place ought to be a centre of good. We have been working along seeing patients quietly for several months, but seized upon the visit of Dr. Arthur H. Smith to our capital as affording the opportunity we wanted in order to iuvite official guests to see the place. The Goveruor was represented by Taotai Chu Yen-hsi, the Commissioner of Education by a Wei-yuan, and the district magistrates of Changsha and Shan-hwa were hotb present. Our provincial judge planned, till the last moment, to be present, but on account of the pressure of work in connection with his promotion to the position of provincial treasurer, he sent his card with regrets. Eacb of the officials present made a short address ; the Taotai's conveying the good wishes of the Governor as well as his own congratulations. After the officials had spoken, Dr. Smith had fifteen minutes to speak a straight message to the guests, aud he spoke forcefully not only of the ohjects of this particular hospital, hut also of the theme which is so constautly on his mind— the attitude of the officials in general toward the work that is being done by foreigners for the people of this country. (I cannot keep from digressing long enough to mention another address given here hy Dr. Smith ; this one to the students of Changsha, wbo were invited to assemhle in the large hall of the Yale school and which was a stirring message on the Opportuuity of the Student in

China to-day. The audience was held spell-bound, for we have no one in this province who has been on the field anything like the length of time that Dr. Smith has, and no one who can so hold the Chinese by the constant use of proverbs and sayings that mean so much to them.) The exercises in connection with the hospital opening were held in the hall of the Yale school, and after they were over, the guests went across the street to the hospital, and looked it over rather thoroughly. Nothing interested them so much as the wickless blue flame oil-stove, which is so necessary a part of our outfit. The district magistrate of our district took great pains to charge me to run no risks in operating, because, he said, the people do not yet understand you well, and might get you into trouble if anything went wrong. I suppose he would think it very bold to be operating with ether, as we do not infrequently.

The hospital has accommodations for three patients each in two of the wards, and for two each in four other smaller wards, or for fourteen in all. At a stretch four more might be accommodated. The four small wards have just been made available through the generosity of Mrs. William R. Thompson, of New Haven, Connect., who has borne the entire expense of remodelling and furnishing them. In addition to the above and quarters for a Chinese trained doctor (trained in a mission hospital in North China), whom we expect to have join us in the fall, we have a good doctor's laboratory, a clean operating room, and good accommodation for the dispensary work.

Mrs. Brownell Gage (Woman's Medical College of Phila.) has made it possible to see a considerable number of women patients, and the problem of dispensing as well as of general supervision of the household side of the hospital has been solved only with the efficient help of Mrs. Lawrence Thurston, also of our mission. We expect two more men from home within the next three years.

I have been meaning to write and tell Dr. Venable, of Kashing, that we not only see hare-lip cases on the street, but that they are beginning to come in for remodelling. I have one in the ward now, who is to be operated on in a couple of days. I am struck by the number of students who come for treatment. They form a very large proportion of all our cases and represent all the outlying districts around. Like Dr. Hart, of Wuhu, a goodly number of cases of fistula in ano come for operation, and it is astonishing to see how easily a case of average difficulty can be done with local anesthesia. My experience in this regard entirely coincides with that of Drs. Carr and Guinness at Kaifeng.

ST ANDREW'S DISPENSARY, WUSIEH.

I must also tell you of my great satisfaction in two surgical methods that I saw during 1906-7 in *Annals of Surgery*. One was the administration of ether by the drop method on gauze (Ladd and Osgood. *Annals of Surgery*, 1907, xlvi., p. 460). There is no apparatus beyond a pad of gauze twelve layers thick, on which ether is dropped rapidly. There is no stage of excitement if properly given, and almost never any post-operative vomiting. In addition, chemical studies have shown what is still more desirable, i.e., that acetonuria after operation is reduced from 88½ to 26 per cent. This method removes at least one of the objections to the use of ether urged on page 39, January issue, CHINA MEDICAL JOURNAL for 1907. I am also inclined to think that I am not alone in squirming as I read the statement on page 340, in the November issue, that "chloroform still holds the premier place as an anesthetic for abdominal operations". At present writing I cannot remember seeing chloroform used in abdominal cases during four years of hospital experience at home.

The second innovation was an operation for hemorrhoids devised by Pilcher, of Brooklyn (*Annals of Surgery*, 1906, xliv., p. 275).

I must close this long epistle with every good wish.

Yours very sincerely,

EDWARD H. HUME.

FORMAL OPENING OF ST. ANDREW'S DISPENSARY, WUSIEH, KIANGSU.

We had the very great pleasure of being personally present at the opening of St. Andrew's Dispensary, A. P. E. M., Wusieh, Dr. Claude M. Lee in charge, on the 14th, of March. The day was perfect, and a representative gathering of native Christians, Wusieh gentry, and guests from Shanghai and Soochow was present. The meeting in the waiting room was presided over by the Rev. G. F. Mosher, in charge of the evangelistic work in the station, who introduced the speakers, among whom were the Rt. Rev. the Bishop of Shanghai, Taotai Sih, the two City Magistrates, Dr. Yang, and several others. Dr. Lee himself made the opening address of welcome. Also, we suffered the agony of making our first speech in Mandarin.

A feast of some fifty covers was then served, and after several photographs of the guests had been taken, the dispensary was thrown open to the public for inspection.

The building is admirably suited to its purpose, the beginning of medical work in a large native city, and under the charge of a single physician. A grey brick structure, well built and well planned, extremely neat, and in the very best of taste. A large waiting room divided by a railing for men and women, each division opening into treatment rooms separated by a central drug room, and a simple but thoroughly satisfactory little operation room back of these and facing north.

The dispensary is on the main street of the city and also on the main canal in which even large house boats may approach it with ease. The first clinic was held on Monday, the 16th, and over fifty cases were treated ; this large number has more than held good since that time.

We were particularly pleased to note a corner reserved for clinical laboratory work, and a good microscope, bacteriological incubator, centrifuge, etc., etc., which gave promise that from the very start careful and thorough work would be done.

Dr. Lee has shown the signs of excellent judgment in his plans. He has neither undertaken more than one man should, nor failed to see something of what the future is likely to bring him. A letter from the Doctor, received this minute, while I write, says: "To-day we had eighty-two patients in the clinic, besides six one-dollar patients. Scabies, entropion, and trachoma are our best customers, though we see something of aural polyps too."

God-speed to scientific medicine in Wusieh !

EDITOR.

The China Medical Journal.

VOL. XXII. MAY, 1908. No. 3.

The yearly subscription to the China Medical Missionary Association is $4 Mex., payable in January of each year. This includes the JOURNAL and postage on the same, whether local or foreign.

All changes of address, departures on and arrivals from furlough should be notified to the Secretary and to the Presbyterian Press. Members are requested to invite new comers to join the Association.

The Editors will be obliged if all those who are building hospitals will send copy of plans and detailed description (in duplicate if possible). These will be loaned, on application, to members who are proposing to build.

Editorials.

Progress.

With this issue a year has passed since our last Conference—a year which the Editors look back upon with considerable satisfaction. It has been the best year since the foundation of the Association; there have been more signs of life and healthy living than we have ever seen before. In our report to the Conference we made the promise that if the Association would make an effort to give us the material for a better JOURNAL, we would do our part from the editorial standpoint. As to whether we have succeeded in improving the JOURNAL during the past year, we are not in a position to say. But it is certainly true that we have never received so many pleasant expressions of satisfaction therewith as during the past twelve months, and our correspondence has outgrown our own epistolary capabilities, though it has by no means exceeded our satisfaction in the reading. The circulation of the JOURNAL has increased materially, but with the better and more frequent illustrations the expenses have also increased. We therefore beg leave to second the efforts of the Treasurer in urging the prompt payment of all arrears in Association dues; we would also particularly request you to aid us with regard to our advertisements by mentioning the fact of having noted the same in the JOURNAL whenever writing to advertisers.

* * *

Hospital half-tones.

We desire to call attention to the fact that we have printed excellent reproductions of views of hospitals in China during the past four years, and the blocks of these prints are in the possession of the JOURNAL. It was formerly our custom to lend these blocks to the various hospitals for reports and so forth. With a view to improving our financial

position we have recently adopted the plan of offering for sale at half the cost price any such blocks as the hospital authorities may desire to own. In general, this would also apply to blocks of professional interest, though we would prefer not to guarantee to sell all of these. The terms are extremely liberal and have already been accepted by a number of contributors.

When desiring to purchase such blocks, please write directly to the Presbyterian Mission Press, Shanghai, and ask that the block be forwarded to yourselves, or to whatever printing office you desire to patronise. Of course only those who have contributed any special photo. are permitted to buy the block thereof.

* * *

A Correction.

We desire to apologise for the omission of the writer's name from the excellent paper on the Kerr Refuge for the Insane, published in March. It might be considered a serious omission, if we did not all know very clearly that it was from the pen of Dr. C. C. Selden, who is in charge of the institution. Dr. Selden apparently failed to notice the omission, but was telepathically incapacitated, perhaps, thereby to the extent of failing to get his second paper in for this issue.

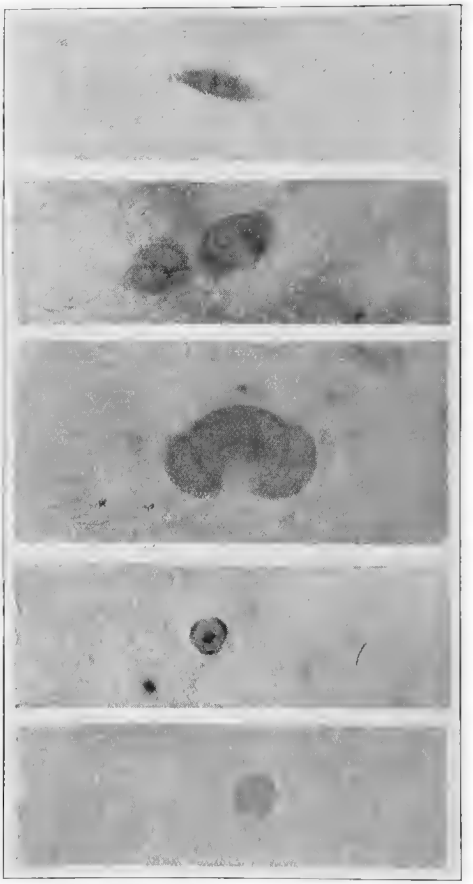
* * *

Vegetable Matter in the Faeces.

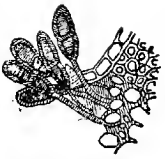
Text-books on fecal examinations keep constantly referring to the danger of confusing certain vegetable bodies with the ova of intestinal parasites. But as Dr. Young points out, in his most interesting letter which we print in this issue of the JOURNAL, they invariably fail to throw any light on the above-mentioned vegetable matter and its differentiation. In our lay capacity as the writer of "Kodaking for Small Game," we desire to acknowledge very gratefully the light that Dr. Young has thrown on the body described in that article as unknown to us, and to accept with assurance his opinion that it is a Teleuto-gonidea (a). (See Vines' Botany, p. 304, for verification.) The body is one of the compound gonidea, broken loose from the mycelium. Three other bodies of undoubtedly vegetable nature are being found, and that they may not cause further confusion we take this opportunity of calling attention to them.

The first, which we* have ourselves seen in four patients, and of which Dr. Cole, of Ningpo, has sent us specimens from one of his

* Dr. Day and the writer.


A
B
B
C
D

a. (After Vines.)



a. (After Vines.)

b. (After Vines.)

c. (E. Day.)

c. (E. Day.)

d. (E. Day.)

own patients, is (b) a germinating two-celled microspore, showing the expansion of the exine. (See Vines' Botany, p. 482.) We are not able to name the exact genus, but very possibly Dr. Young will do so for us. The second (c) which we have seen once and Dr. Booth, of Hankow, once, is about the size and has somewhat the appearance of a Taenia egg, but is usually trefoil in shape and slightly greenish in colour. But the fact that it varies somewhat in size and has a double cellulose shell, as well as the peculiarly clear and stiff appearance which is so characteristic of vegetable matter, would indicate its nature. The genus of this also will be referred to Dr. Young. The third body (d) has the colour of the Teleuto-gonidea body, a light chocolate brown, is small and round, but varies in size, is found in certainly fifty per cent. of all stools, has a thin, double shell marked with irregular tracery and contains usually an oil drop.

We call attention to these bodies without waiting for further definition in order that others may have the advantage of the Editors' experience and of Dr. Cole's therewith.

Dr. Booth calls attention to the known fact that certain of the eggs of Opisthorchis Sinensis have a spine at the broader end, while others are quite plain. In this we thoroughly agree with him. We have also found certain of them which, while having the spine, certainly do not show any operculum, though sometimes slanting lines indicate its future site. These latter were present in a specimen in which the eggs were remarkably abundant. They present a rather granular appearance, similar to the unfertilized ascaris egg, are slender and pointed and possibly represent the unfertilized form of Opisthorchis sinensis egg. Dr. Tyau and the writer have observed them in utero, as well as in stool.

QUININE IN CHOLERA.

During the epidemic of cholera which raged on the Yangtze some years ago the surgeon of the U. S. gunhoat *Villalobos*, who was travelling on one of the infected steamers, had no other drug at his disposal, so he treated a case with large doses of quinine. At the time we paid little attention to this remedy for cholera, but since then the use of it has been brought before the attention of the profession by Professor Koch, who recommended its use. Ussher in the Philippines, acting on Koch's suggestion, has met with decided success in the treatment of the outbreak of cholera which took place there some time ago ; as many as ninety per cent. of the patients recovering. The plan of treatment was as follows : Sulphate of quinine in ten grains doses every hour until the ricewater stools had disappeared and bile was passed in the motions. For suppresion of urine, friction of the limbs, hot fomentations, dry cupping over the loins, and sweet spirits of nitre were found useful. When evidence of failing circulation supervened, subcutaneous injection of saline solution proved heneficial.

METHOD OF MOUNTING SPECIMENS OF OVA, EMBRYOS, AND SMALL WORMS.

Dr. C. G. Low, who was for some years the medical superintendent at the London School of Tropical Medicine, gives the following instructions relative to the above. For filarial embryos a large drop of blood is placed on the slide, spread out so as to form a film, and then allowed to dry. After this it is placed in water till all the red color of the hlood disappears, and then a few drops of any stain, such as fuchsin, methylene blue, or hæmotoxylin are applied for a few minutes. Wash again in water, dry and mount in Canada halsam.

Small worms such as *Trichocephalus dispar*, *Anchylostomum duodenale*, are best placed for a few days in a two per cent. formalin solution, then in glycerine, and from this iuto glycerine jelly, in which they are mounted. Bilharzia ova for permanent preparations are obtained by mounting the little shreds of mucus passed in the urine in glycerine or glycerine jelly.

Eggs of intestinal parasites found in fæces are best mounted in formalin, five to ten per cent. In all those specimens in which glycerine, glycerine jelly, or formalin is used it is important to remember that the cover slips must be ringed with Canada balsam or asphalt to prevent the subsequent evaporation of the medium which always takes place.

With a little practice very beautiful specimens may be permanently obtained by any of the above methods.

CHINESE MEMBERSHIP IN THE ASSOCIATION.

An important question has come to the attentiou of the Executive Committee of the Association whicb calls for careful consideration and prompt solution. The names of two graduates of the medical department of a certain legally American Chartered University in China, holding tbe degree of M.D., have been presented to one of the local hranches and their election held over hecause of tbe fact that though personally desirable, well qualified, and legally so according to American law, though engaged in active mission work and tborougbly in sympatby witb the same, though earnest Christians and in every way personally eligihle to active membership, it was realized that tbeir admission might be made a stepping stone for the admission of graduates of some of the hospitals wbich cannot and do not put out thoroughly trained men nor have the legal status for doing so. In other words, it was feared by some in high places tbat our standards were in danger of suffering, not by these men but by otbers whose admissiou would be insisted on and whose training would not be such as to make them desirable as members of our scientific body.

The question is not of nationality, we have already a number of Chinese in the Association, but of place. Graduates of Britisb, American, etc., universities *at home* are eligible. Are graduates of British or American universities *here* also eligible?

Active membership in this Association has three requirements:—

1st. Graduation from some recognized medical college.
2nd. Engagement in medical missionary work in China, etc.
3rd. General or local electiou.

If recognition by the American government does not cover the first, we beg leave to courteously inform our readers that nothing on sky, land, water, or the depths does so. We infer from our own sentiments that our cousins feel the same way with regard to their own national recognition. We decline to argue "recognition" further. Certainly national recognition is as far as we can go at present.

Engagement in medical missionary work is self-explanatory. It should be genuine and should be not merely a temporary engagement but give promise of endurance. In other words, it sbould be missionary, not merely financial.

General or local election is a matter well understood and merely a safeguard to the honor and welfare of the Association. We do feel that in the case of our Chinese graduates, if they are qualified (otherwise certainly not), we should from every standpoint make a deadly mistake to exclude them from the mutual advantages of membership. We should hopelessly damn our own educational work, we should be exclusive to the point of brutisb snobbery, we sbould cripple our chance to bold our influence and keep in touch with our own intellectual offspring, we sbould divert a valuable scientific and financial asset and generally make a mess of it.

We have the following suggestions to make:—

1st. That nationally recognized institutions in China should register the fact with the Executive and the list be held for reference. That only graduates from such be eligible.

2nd. That only regular graduates holding medical degrees from such be eligible.

Tbat is, that the graduates must have received their course in the institution conferring the degree, not in some neighboring bospital.

3rd. That the missionary qualification be strictly insisted upon—for obvious reasons.

SERUM DIAGNOSIS AND TREATMENT.

Serum diagnosis and serum treatment have come to stay and it is well for us to keep ourselves up to date on these subjects. We draw attention to Professor Calmette's work in connection with

the conjunctival reaction as a diagnostic point in connection with tuberculosis. Following up the idea suggested by the tuberculin skin reaction to which Von Pirquet had drawn attention, and also the researches of Wolff-Eisner on the reaction of healthy mucous membranes to certain toxins, Calmette was led to seek for a diagnostic reaction by the application of tuberculin to the conjunctiva. Calmette advised the use of a *one per cent.* solution of dried tuberculin in sterile distilled water. Comby, writing in the November number of *Le Bulletin Medical*, advises the use of *half per cent.* solution as he found that the *one per cent.* solution as advised by Calmette produced considerable chemosis and purulent secretion. Three degrees of reaction may be observed. 1. A slight reaction may be overlooked if the internal angle of the eye is not carefully examined and compared with the other side. This form rarely persists more than two or three days. 2. A moderate reaction in which the internal portion of the eye is injected and the caruncle and its adjoining fold are markedly swollen and reddened. The palpebral as well as the ocular conjunctiva is affected, and fanshaped bundles of vessels may be seen starting from the inner angle of the eye towards the corneal border. There is some lachrymation, and fibrino-purulent flocculi are present. This degree of reaction is readily visible without comparison with the other eye, and persists five to seven days. 3. An intense reaction which affects the whole conjunctiva and may produce swelling of the lids, purulent secretion and considerable discomfort. In a few cases vesicles have been seen at the border of the cornea resembling those seen in phlyctenular conjunctivitis, and in others slight conjunctival hæmorrhage. This degree of reaction is visible at some distance and persists for a period of seven, ten, or even fifteen days. This intense reaction is rare and is seldom seen when the weaker solution of tuberculin is used, but it is entirely local and neither produces elevation of temperature nor modifies a pre-existing feverish state. After instillation of the solution the reaction may begin in six hours. It first appears about the caruncle and it may be necessary to abduct the eye before it can be seen. It is necessary too to compare it carefully with the other eye.

The oculo-reaction to tuberculin may be repeated indefinitely in the same patient without losing its value. A positive reaction may be obtained when tuberculosis is latent as well as in patients actually moribund. Cases of tubercular meningitis react at all stages. Surgical tuberculosis gives as decided a reaction as that obtained in phthisis.

The sole contraindication of the oculo-reaction is the presence of blepharitis or any inflammatory state of the conjunctiva or cornea. It is important to allow forty-eight hours to elapse before deciding that no reaction has taken place as it may be merely delayed.

CONJUNCTIVAL TYPHOID REACTION.

The recent researches on the diagnosis of tuberculosis by the reaction described above induced Professor Chantemesse to try whether a similar result could be obtained in typhoid fever. He precipitated a strong solution of typhoid toxin with absolute alcohol and obtained a powder of which 1/50 mgm. dissolved in a drop of water gave a definite reaction when instilled into the conjunctiva in typhoid fever. The test caused no inconvenience as the temperature and general condition were unaffected. When instilled into the eye of a healthy person or one suffering from another disease than typhoid a slight redness and lachrymation is produced in two or three hours, which passes away at the end of four or five hours. On the following day all change has disappeared and the injected eye is absolutely similar to the other. In patients suffering from or convalescing from typhoid fever the reaction is much more intense. It attains its maximum from six to twelve hours after instillation, and persists till the following day. It is characterised by redness, lachrymation, and serofibrinous exudation. It is possible to recognise twenty-four hours after which eye has been treated, even at some distance, and it is not unusual for the redness to persist for two or three days. It is yet uncertain how early in typhoid fever this reaction may be produced, but a positive result has been obtained in rabbits twenty-four hours after the subcutaneous injection of typhoid bacilli.

MEDICAL MISSION STATISTICS. 1907.

Mission.	Location.	Name of Hospital, or Dispensary.	Medical Missionary.	Foreign Nurses.	Chinese Assistants. M.	Chinese Assistants. F.	Medical Students or Pupil Helpers. M.	Medical Students or Pupil Helpers. F.	Beds.	Patients. In-patients. M.	In-patients. F.	Dispensary New. M.	Dispensary New. F.	Dispensary Return. M.	Dispensary Return. F.	Out-calls. M.	Out-calls. F.	Itinerating.	Total.	Surgical Operations. General. With Anæsthetic.	General. Without Anæsthetic.	Eye.	Gynæcological.	Obstetrical.	Dental.
American Baptist Missionary Union	Hanyang, Hupeh	Hanyang	Huntley, Bretthauer	...	3		1	1	50	149	15	2,150	763	4 392	1,229	577		...	9,275	234	30	18	...	3	97
	† Huchow, Chekiang	Huchow	Eubank	...	2		......		20	145		6,100		....		44		200	6,344	58		33	...	1	...
	Kak-chieh, Swatow	E. R. Scott Memorial Martha Thresher Memorial	Worley, Scott.	...	1	1	4	5	103	689	359	Dr. Worley's death interrupted the work								......		...	...	...	...
	* Kaying, Kwangtung	Kaying	Grant	...		1	1	2	6		4		1,409			40			3,675	2	41	3	2	...	41
	* Kiehyang, Kwangtung	Kiehyang	Bixby	...	2	1	2		30		1,248	2,895		4,490		82		...	8,715	7	132	173	...	8	138
	* Suifu, Szechuan	Suifu	Tompkins	...	2		......		28	82	11	930		2,275		50		522	3,870	15	36	3	1	7	9
American Board of Commissioners for Foreign Missions	Foochow, Fukien	Women's and Children's	Woodhull, Stryker	...		1		8	24		170		3,851		5,925		254	371	......	40		...	...	...	...
	* Pagoda Anchorage, Fukien	Jangseng	Whitney	...	.....		......		...	......		....		....		......		...		......		...	...	...	...
	Pangchuang, Shantung	Williams	Tucker, F. F. Tucker, Emma B.	...	2		1	1	80	368	173	2,833	1,354	1,889	903	23	22	...	7,565	67	216	198	5	11	56
	† Shaowu, Fukien	Shaowu	Bliss	...	......		3		20	69		3,128		4,843		250			8,289	66		9	...	...	35
	† Tungchow, Chihli	Tungchow	Ingram	...	3	1	1		40	103	17	1 672	576	8,697	4 017	5	12	802	15,781	120		40	...	...	...
American Church Mission (Protestant Episcopal)	Anking, Anhuei	St. James'	Woodward, Taylor	2	2	1	3	2	30	401		9,159		9,566		80		...	19,206	344		...	...	...	...
	Shanghai	Jessfield	Lincoln	...	1		......		...	......		2,541		4,771		......		...	7,312	......		...	...	...	...
	Shanghai	St. Luke's	Boone, Jefferys, Tucker	1	3		5		95	1,212		13,779		27,599		280		234	43,220	......		...	...	...	...
	Shanghai	St. Elizabeth's	Myers	1		4	......		60		365		1,913		2,127	1	30	...	4,435	66	202	...	...,	6	29
	Wuchang	St. Peter's	MacWillie	...	......		1		40	429		4,016		4,265		328		206	9,244	67	379	7	...	1	46
Baptist Missionary Society (of England)	* Taiyuenfu, Shansi	Tsiyuenfu	Broomhall	...	2	1	4		...	52	34	1,291		2,760		58		...	......	116		...	...	...	--
	Tsouping, Shantung	Tsouping	Paterson, T. C. Paterson, Mrs.	...	1		9		30	......		4,623	4,430	2,010	1,571	......		...	......	58		...	...	...	...
Basel Mission	Kayingchow, Kwangtung	Basel Mission	Wittenberg	1	3		5		50	219	204	6,049		12,773		......		...	19,245	79	209	73	8	6	310
Canadian Methodist	* Kiating, Szechuan		Service	...	1	1	......		30	75	22	1,338		2,961		145		335	4,876	66	22	1	...	3	...
	Rensheo, Szechuan	Rensheo	Cox	...	......		......		12	39		1,112		2,384		15		...	3,511	15		...	...	...	10
China Inland Mission	Chefoo	Douthwaite Memorial	Hogg	...	1		3		36	169	18	3,793	714	5,630	616	......		...	10,753	90	161	4	4	2	114
	† Chinkiang, Kiangsu	C. I. M.	Cox	...	1		5		...	100	6	6,000	2,000	4,000	2,960	250	150	...	15,466	283		30	...	...	500
	Jaochowfu	C. I. M.	Judd	...	......		2		12	68	10	874	320	802	331	61		100	2,566	18	57	35	...	...	72
	† Taichowfu, Chekiang	C. I. M.	Anderson	...	1		2		8	71	32	714	239	3 047		200		100	4,403	31		15	1	..	20
	* K'aifengfu	Fuhyin	Carr	...	2		......		...	92	2	5,045				44	13	...	5,196	106	13	108	2	...	...
Church of England Mission	Chemulpo, Korea	St. Luke's	Weir	1	......		3		25	115	14	1,053	803	2 168	1,602	......		...	......	121		...	...	...	...
	Peking, Chihli	Church of England	Graham Aspland	2	3		......		20	106	38	1,640	2,784	5,835	5,338	116	103	...	11,536	120		...	..	...	...
Church of England Zenana Miss. Society	Foochow, Fukien	Lungsang	Shire	...		1	......		32		85		870		3,938	170		...	5,063	12	4	5	3	7	...
Church Missionary Society	Foochow, N. Gate	C. M. S. Men's	Wilkinson, Mackenzie	2	2		3		80	303	182	2,002	1,544	4,952	3,749	80	136	542	13,490	52	350	...	...	3	230
	Hing Hwa	Stewart Mem. Women's	S. Taylor, Sanger	2	3		8	3	172	990	671	8,334		8,176		50		...	......	36	293	...	...	...	300
	Kienningfu, Fukien	C. M. S.	Pakenham, Churchill	1	1		5		61	202	112	1,380	171	2,482	313	65	33	4,361	9,119	28	127	5	...	1	...
	* Kueilin, Kwangsi	C. M. S.	Clift	...	......		......		...	......			800	....		......		...	......	......		...	...	...	...
	Ning Daik, Fukien	C. M. S.	Harrington	...	......			1	6		58	233		1,612			31	364	2,298	1	18	2	...	3	4
	Ningpo	C. M. S.	Cole	...	2	1	2		...	350	179	7,401				50		381	7,401	155	232	24	1	13	330
Church of Scotland Mission	Ichang, Hupeh	Rankine Memorial	Graham, Stooke, G. F. Stooks, J. J.	1	3	2	......		64	578		7,253		9,239		......		...	17,010	118		10	...	...	...
Cumberland Presbyterian	Changteh, Hunan	Sunday School	Logan, Berst	1	2		3		25	174	5	3,894		4,037		141		8	8,251	75	189	93	...	5	58
Danish Lutheran Mission	Antung, Manchuria	Danish Mission	Ellerbek	1	......		2		...	......		4,452	143	9,369		174		...	14,108	21	149	16	...	...	92
English United Methodist Mission	Lao Ling, Shantung	U. M. M.	Marshall	...	4	1	1		42	45	196	1,599	788	1,008	463	200		125 2,582	6,990	82	181	36	5	...	104
	Yungpingfu	U. M. M.	Baxter	...	.. ..		1		12	46	20	632	66	557	12	8	15	24	1,380	37	28	...	...	3	...
	Wenchow	Henry Blyth	Plummer	...	1		6		80	749	217	6,562		5,121		......		...	11,683	84	27	112	...	...	...
Finnish Mission	Tsingshih, Hunan	Finnish Mission	Helkinheimo	Work	opened		25th	Oct.	1907	10	1	210	78	230		1	3	...	533		7	...	...	...	...
Irish Presbyterian Mission	* Chinchow, Manchuria	I. P. M.	Keers	...		3		3	10		64		1,245		686		46	350	2,391	14	20	11	1	6	15
	* Hsinmintun, Manchuria	I. P. M.	Learmonth, B. L. Learmonth, A. M.	...	......		4		30	172		4,396	1,653	13,552	2,843		60	...	23,504	232	136	39	...	1	86
	Kwanchengtzu, Manchuria	Women's	McNeill	...		1		3	40		110		858		570		42	...	......	56	15	3	3	7	5
	Newchwang, Manchuria	Irish Mission	Phillips	...	2		3		44	425		2,634		17,234		......		...	......	217	269	...	...	6	183
London Missionary Society	Chungking, Szechuan	London Mission	Wolfendale	...	1		2		50	241		3,800		6,108		......		...	9,908	68	140	...	...	...	...
	* Hankow, Hupeh	Men's Hospital	Gillison, McAll	...	6		14		65	837		3,942		3,600		......			......	360		64	...	...	...
	Hengchow, Hunan	London Mission	Peake	...	1		......		20	47	3	750		750		Five Months only				......		...	...	...	...
	Hongkong	Alice Memorial, Nethersole, Hominling, Alice Mem. Maternity	Gibson, Sibree	1	2		29	10	100	612	446	16,163		12,122		141			29,484	157	25	168	9	28	1,407
	Hsiaochang, Chihli	London Mission	Stuckey	...	1		1		50	115		3,483				......		...	......	29	67	17	...	7	...
	* Peking, Chihli	Peking	Cochrane, Peill	...	2	1	5	3	...	362	120	....		....		......		...	48,664	195		...	...	...	...
	* Peking, Chihli	Women's	Saville	...		10	......		25		94	4,462		7,522			179	...	12,257	22		...	...	...	...
	Siao Kan,	Siaokan Hospital and Leper Home	Fowler	1	4	1	......		30 60	328	42	5,066		12,629		250		150	......	568		56	3	2	197
	† Tsangchow, Chihli	Robert's Memorial	Peill	...	4	2	12		80	293	122	2,327	727	4,209	925	......		...	8,623	312		272	1	...	...
	Tsaoshih	London Mission	Wills	...	......		4		30	188	4	2,027		1,728		5½ months			......	200		...	...	...	...
	Wuchang	London Mission	Somerville	...	4			2	50	217		2,270		3,869		16		...	6,422	79	12	14	...	...	...
Community L. M. S.	Shanghai	Shantung Road	Davenport	1	3		3	5	85	1,068	177	27,017	8,658	25,800	3,727	193	171	...	65,572	368		...	...	...	...
Medical Missionary Society	Canton, Kwangtung	Canton	Swan	1	1	1	2	2	340	1,247	700	10,000	5,000	4,000	2,500	200	200	...	23,947	1 046		...	...	...	...
Methodist Episcopal Church	Ch'angli, Chihli	Martyr's Memorial	Keeler	...	......		......		...	500		5,679				......		...	6,179	121	234	...	...	...	..
	* Chentu, Szechuan	General	Canright	...	8		......		20	118	5	3,688	570	10,223	2,100	47	6	...	16,907	20	100	5	1	6	25
	Chinkiang, Kiangsu	For Women and Children	Hoag, Taft	...	......			5	18		243		2,943		2,654		126	...	5,966	......		...	...	...	...
	* Chungking, Szechuan	General Men's	McCartney, Freeman	...	12		......		100	722		15,283				538		1,235	17,778	310	545	82	15	30	176
	† Kiukiang, Kiangsi	Danforth Memorial	Stone	...		6	......		24		207		5,561		7,224		425	...	13,417	53		...	...	...	...
	Sixth Township, Mengchiang, Fukien	Sites Memorial, Good Shepherd	Carleton	...	1			3	20	20	80	3,783		....		250		...	4,133	......		...	...	...	...
	Peking	Methodist	Hopkins, Lowry	...	3		......		45	177		7,840		13,175		385		...	24,577	......		...	...	...	...
	* Suengfu, Fukien	Eliza Nast Memorial	Betow	...		5		1	70		223		790		2,246	79		228	3,663	......		...	...	...	...
	* Taianfu, Shantung	Taianfu	Ensign	...	1		......		6	......		1,847		1,921		25		...	3,193	......		...	...	...	...
	* Taianfu, Shantung	Women's and Children's	Benn	...	......			1	24	4	24	570		1,834		8	35	105	2,655	21		25	1	3	10
	Wuhu	Wuhu General	Hart, Houghton	1	1		4		80	373	83	3,104	742	4,011		881		...	9,230	144	251	19	2	4	62
Methodist Episcopal Church, South	Soochow, Kiangsu	Soochow	Park	...	3		3		50	675	24	12,011	1,000	4,582	411	285	266	...	19,254	90	194	35	...	...	...
	Soochow, Kiangsu	Mary Black Memorial	Polk	...		2		2	35		339		5,865		4,850		278	...	11,332	260		...	...	...	...
Norwegian Missionary Society	Changsha, Hunan	Women's and Children's	Gotteberg	1		2	......		20		76		654		1,640		6	...	2,376	8	8	...	...	...	7
	Iyang, Hunan	Nor. Miss. Society	Nilssen	1	1		3		50	169	41	1,033	300	1,336	352	15	39	...	3,285	38		2	2	4	12
Presbyterian Church in Canada	Hweichingfu, Honan	Bloor St. Church	Menzies, Scott	...	......		2		24	.....		5,063		14,141		......		...	19,204	107	85	50	15	1	35
	* Weihuifu	Weihui	McClure	...	3		......		100	.....		....		....		......		...	15,034	191		...	...	...	...
Presbyterian Church of England	Changpoo, Fukien	Changpoo	Montgomery	...	......		6		55	363	48	1,071	385	4,804		78		...	6,749	34	22	20	6	5	54
	Ch'aochowfu, Kwangtung	Burns' Memorial	Whyte, Wight	...	1		11		92	762	282	2,257	1,269	14,433		60	40	...	19,103	......		...	..	...	...
	* Chianghoa, Formosa	Chianghoa	Landsborough	...	5		......		50	394	148	5,818	1,881	9,870		40	46	331	18,420	194	281	435	...	12	77
	† Chinchew, Fukien	General	B. Paton	...	......		9		90	637	83	1,468	279	....		169	55	...	9,465	296		...	...	...	63
	† Chinchew, Fukien	Women's	K. Paton	...	......		......		23		173		1,455	....			224	...	......	65		...	...	...	139
	‡ Engchun, Fukien	Engchun	P. Maxwell	...	......		7		50	456	61	1,001	195	2,900		45	46	780	......		132	87	9	...	143
	Swabue, Kwangtung	Swabue	Sandeman	...	1		5		60	243	14	1 288	311	....		25	20	136	......	......		...	...	...	...
	Swatow, Kwangtung	Swatow Mission	Lyall	...	2		10		210	2,578	441	5,571	1,267	12,809		274	192	...	......	658		430	...	7	224
	Swatow, Kwangtung	Women's	Beath	...		2		6	92		884		1,215		4,127		596	541	......	141		259	...	91	89
	Tainan, Formosa	E. P. Mission	J. L. Maxwell	...	1		5		160	1,781	619	2,312	1,433	5,941	2,818	51	40	100	15,095	384	819	418	12	9	69
	† Takow, Formosa	Takow	Anderson	...	......		2		20	235	49	650	287	....		133	78	328	5,731	130		118	...	...	66
	* Wukingfu, Kwangtung	E. P. Mission	Kiddell	...	2		7	2	70	548	192	2,128	1,352	3,867		......		200	8,287	50	173	80	...	7	95
Presbyterian Church in U. S. A. (North)	* Chinanfu, Shantung	McIlvaine	Neal	...	2	1	9		35	181	39	3,033	1,600	3,704	1'343	184		...	10,083	215		86	...	..	52
	* Hoihow, Hainan,	Hoihow	McCandlis	...	4	1	......		70	527		....		....		......		...	10,605	55		.	5	...	...
	* Hwaiyuen, Anhuei	Hwaiyuen	Cochran	...	3		1		10	63		1,071		3,905		13		...	5,052	62	6	167	...	1	...
	Ichowfu, Shantung	Women's	Fleming	...		2		2	20		114		3,713		2,628	48		358	6,742	3[illegible]	175	13	...	3	112
	† Paotingfu, Chihli	Taylor Memorial	Lewis	...	1		2		50	270		6,000		8,376		54		800	15,550	254		...	...	...	...
	Ichowfu, Shantung	Ichowfu Men's	Fouts	...	3		3		20	129		11,925		10,227		80		208	22,569	58	162	21	...	...	...
	Peking, Chihli	Douw	Leonard	.	......			2	17		70		8,096				154	...	8,320	......		.	...	19	...
	Pyengyang, Korea	Caroline A. Ladd	Wells	...	1	1	1		30	456		7,869		3,430		263		...	12,018	162	252	...	...	...	...
	Siangtan, Hunan	The Nathaniel Tooker	Vanderburg, Tooker	...	......		......		30	87		1,201		1,502		65		...	2,855	12	49	...	...	...	...
	Soochow, Kiangsu	Tooker Memorial	Cattell	...		2		1	25		108		3,031		2,269		187	466	6,061	16	176	...	...	...	40
	† Tengchowfu, Shantung	Tengchow Presb., Men's	Seymour	...	3	1	......		16	39	9	2,491		4,653		20		50	7,442	145		10	...	..	140
	Weihsien, Shantung	Men's	Roys	...	......		2		32	284		3,264		1,935		15		489	......	128	7	...	...	...	25
Presbyterian Church in U. S. (South)	Dongshang, Chehkiang	Dongshang Presbyterian	Shields	...	......		4		12	76		1,235		2,695		45		...	4,081	80		4	...	...	62
	Kashing, Chehkiang	Kashing Presbyterian	Venable	...	1		5	2	40	200	140	4,382		5,070		140		...	9,932	1,330	125	37	13	7	730
	Soochow, Kiangsu	Elizabeth Blake	Wilkinson, Stuart	...	......		15	6	70	385	125	3,637		9,036		72		...	13 256	93	1,095	...	...	...	59
	Suchien, Kiangsu	Women's Dispensary	Mrs. Patterson	...	......		......		...	......			2,000		2,124	......		...	4,124	......		...	...	...	...
	† Tsingkiangpu, Kiangsu	Tsingkiangpu	Woods	...	.....		1		25	112	28	6,152	1,540	5,997	1,500	88	120	...	15,487	578		39	2	2	...
Reformed (Dutch) Church in America	* Amoy, Fukien	Hope and Wilhelmina	Otte	...	1		4	1	100	1,002	456	821	2,214	4,269	1,185	1,076		...	9,605	271		116	26	7	79
Reformed Church in U. S. (German)	* Cheuchowfu, Hunan	Cheuchowfu	Kelly	...	......		......		100	......		....		....		......		...	......	......		...	...	...	...
Rhenish Missionary Society	Tungkun, Kwangtung	Rhenish Mission	Kühne, Eich	1	1	1	......		100	454	141	2,875	1,710	5,724	3,104	45		...	13,458	978		248	2	13	308
Seventh Day Baptist	* Lienoo, Kwangsu		Palmborg	...		1	1		...		1	2,931		1,304			75	...	4,310		97	1	...	...	135
Southern Baptist Convention	* Pingtu, Shantung	Pingtu	Oxner	...	1		......		...	......		5,205		....		274		128	6,863	132	134	35	3	2	...
	Wuchow, Kwangsi	Stout Memorial	Hayes, Meadows Hayes, Mrs.	...	1		1	1	40	205		4,527		3,016		285		1,463	9,496	51	320	17	3	8	238
	* Yangchow, Kiangsu	Yangchow	Meadows, Mrs. Evans	...		1	1		...	......		962	452	2,624		40		...	4,078	7	81	...	...	...	42
Swedish American Covenant Mission	Siangyangfu, Hupeh	S. A. M. S.	Sjoquist	2	3	1	......		50	172	57	4,216				18		50	4,510	72	57	7	...	...	42
United Free Church of Scotland	* Kaiyuen, Manchuria	Kaiyuan	Young	...	2		......		30	123	28	9,417		33		320		.	......	303		..	...	...	...
	Moukden, Manchuria	Moukden	Christie	...	5		12		60	367		8,000		13,972		256		...	22,595	363	622	106	...	...	232
	* Moukden	Women's	Horner, Starmer	...		3		5	65		339		7,401		6,685		71	4,304	18,804	186	104	67	5	6	...
Women's Union Missionary Society	Shanghai	Margaret Williamson	Reifsnyder, Newell, Garner,	1		4		4	65		741		30,859		18,880		246	...	50,726	165	886	43	31	60	413
Emmanuel Medical Mission	Nanningfu, Kwangsi	Em. Med. Miss.	Clift	...	......			1	3	1	2	513		765		97		..	1,378	3	10	...	...	...	20

Hospitals and Dispensaries given above, 121, about one-half of the total number in China and Korea.

*** Returns for 1906.**

† Returns for 1905.

ASSOCIATION NOTES.

BRANCHES OF THE C. M. M. A.

Central China Branch :—Dr. J. C. Cormack, Hankow, Secretary.
Kuling Branch :— Dr. W. A. Tatchell, Hankow, Secretary.
Manchurian Branch :— Dr. W. Phillips, Newchwang, Secretary.
Korean Branch :— Dr. H. H. Weir, Chemulpo, Korea, Secretary.
Shanghai Branch :— Dr. A. W. Tucker, St. Luke's Hospital, Secretary.

NEW MEMBERS OF THE C. M. M. A.

Joined through the China Medical Journal.

WM. J. WEBB ANDERSON, M.D., Ch.B , Leeds ; M.B., Victoria, Manch, Wesleyan, Fatshan.
ANNA EVANS CORLIES, M.D., Woman's Med. Col. of Penna, A. B. M. U., Yachow, Szchuan.
BRITON CORLIES, M.D., Phila. Medico-Chir., A. B. M. U., Yachow, Szchuan.
ARNOLD DAVIES, M.B., Ch.B., Ed., L. M. S., Tsang-chow, Chihli.
MARGARET EDITH BRYSON. M.B., Ch.B., Glasgow, Eng. Pres., Chinchew.
EDWARD CUNDALL, M.B., Ch.B., Eng. Wes., Hankow.
ELIZA E. LEONARD, M.D., Univ. of Mich., Amer. Pres., Peking.
EDWIN ROBERT WHEELER, M.B., B.S., Lond., M.R.C S., L.R.C.P., Un. Med. College, Peking.

Joined through the Shanghai Branch :—

JAMES LEE HAMILTON PATERSON, M.B., Ch.B., Ed., L.M.S., Shanghai.

The list of members of the Association has now grown so large that, *malgré* the By-laws which call for its publication in the JOURNAL, it is being issued separately. It has not been found feasible to get out a year book, as the Publication Committee's work has ridden rough-shod over everything else in the secretary's office. There are many details yet lacking to bring the list into a fair measure of completeness. The total of active members now stands at 324 ; 95 women and 229 men. A goodly number ! And yet there are those who still coyly stand aloof. During 1907, 58 joined the active ranks. Of these, there were 17 women and 41 men.

Medical Missions in India gives a list of 313 medical missionaries in India, an addition of twelve over the previous year. It also gives a list of missionary nurses. These number 124, an increase of 26.

In China and Korea there are probably about 398 medical missionaries. It is only recently that nurses have been appointed to any extent, and the number, according to our incomplete returns, is ten. According to the list published annually in *Medical Missions at Home and Abroad* the roll of medical missionaries holding British degrees or diplomas is now 395, being 257 men and 138 women. In the last eighteen years the number has more than trebled.

The *Medical Missionary* gives an incomplete list of those serving under American and Canadian Societies ; the total being 386.

A real awakening on the subject has taken place of late years in Germany, and the number of medical missionaries proceeding from that country and Switzerland must be close on a score. France only sends out three or four. The whole number of Protestant medical missionaries must now total over 800.

The statistical sheet for 1907 is sent out with this number. There are two drawbacks to its completeness. The lack of a perfect statistical scheme that will suit everyone and the lack of a perfect set of medical missionaries who will *all* send in their returns. In spite of these defects the yearly figures are of great interest and value. A letter from Dr F. F. Tucker will be found in the correspondence pages. We shall be glad to have a general expression of opinion on his proposal.

Dr. Meadows writes :—" You will be pleased to learn of the organization of the West River Medical Association. It was organized last July and held its second meeting the last of January, at which time it was voted to ask for admission into the central Association. Our association has enrolled all the doctors working in the province of Kwangsi, six in number, and all the doctors in Kwangtung located

on the West River and its tributaries. We have enrolled fourteen members in all. Five years of service is the longest term any of our members has spent on the field, so you see we are all young. Do not expect much of us for many years, but be prepared to assist this small band of inexperienced physicians until we can become thoroughly established, and I assure you we will then do our best to share with the older associations the burdens and the responsibilities of the work. May the year 1908 be a good year for you and your work."

This is very good news. We heartily welcome the latest branch The members are no less modest than energetic. All success to the work in that turbulent region.

The Hodgkins Fund Prize of $1,500 is offered by the Smithsonian Institution, Washington, D. C., in accordance with the following announcement :—

SMITHSONIAN INSTITUTION—HODGKINS FUND PRIZE.

In October, 1891, Thomas George Hodgkins, Esquire, of Setauket, New York, made a donation to the Smithsonian Institution, the income from a part of which was to be devoted to "the increase and diffusion of more exact knowledge in regard to the nature and properties of atmospheric air in connection with the welfare of man."

In the furtherance of the donor's wishes, the Smithsonian Institution has from time to time offered prizes, awarded medals, made grants for investigations, and issued publications.

In connection with the approaching International Congress on Tuberculosis, which will be held in Washington, September 21 to October 12, 1908, a prize of $1,500.00 is offered for the best treatise that may be submitted to that Congress "On the Relation of Atmospheric Air to Tuberculosis."

The treatise may be written in English, French, German, Spanish or Italian. They will be examined and the prize awarded by a Committee appointed by the Secretary of the Smithsonian Institution in conjunction with the officers of the International Congress on Tuberculosis.

The right is reserved to award no prize if in the judgment of the Committee no contribution is offered of sufficient merit to warrant such action.

The Smithsonian Institution reserves the right to publish the treatise to which the prize is awarded.

Further information, if desired by persons intending to become competitors, will be furnished on application.

CHARLES D. WALCOTT,
Secretary, Smithsonian Institution.

Washington, February 3, 1908.

The Hongkong and China Branch of the British Medical Association has taken a room situated at 17a Queen's Road Central, Hongkong for the use of members. Some monthly medical periodicals are provided and the nucleus of a reference library is being formed. Under the energetic influence of the Secretary, Dr. Herbert Sanders, Matilda Hospital, this branch is moving ahead. He asks that a notice as to the opening of the room be inserted in the JOURNAL and reports a splendid paper on leprosy, also a good clinical evening. Those in the vicinity of Hongkong should note that the meetings are held on the third Thursdays of the month.

He writes further :—"The Manila Conference appears to have been a success. They are desirous of developing further the uniting idea and having a bi-annual conference. They were sorry that none of you were at the conference, as it has been suggested to invite the JOURNAL to be the official organ. Is this possible?"

In a welcome letter from Dr. Fleming, Ichowfu, she says :—"I have just completed a comfortable two story hospital, semi-modern, which is an advance in this isolated city. We are working and hoping for better facilities and larger support when the natives appreciate more the work being done for them. This is a very poverty-stricken region."

Heartiest congratulations and best wishes for the highest success in the work done in the new hospital.

Is the title for the fair physicians settled yet? If not, here is a contribution from the far West. "I saw an editorial query as to whether we prefer to be called lady physicians or women physicians. I much prefer the latter. The first seems to me cheapening a serious profession."

The following is culled from a letter from Dr. Preston Maxwell :—"The work here is very heavy. Over 300 outvisits since November first, close on 500 in-patients and 250 operations of all kinds. Have done two epipoplexys in the last six months and a considerable number of urethrotomies. We have no stone here or practically none. Just now there is a severe epidemic of influenza with severe cases of pneumonia."

Influenza would seem to be on a pandemic rampage this spring and to be of a respiratory type.

There is a symposium on *Medical Missions in India* on the subject of "Appendicitis in India," from which it would appear that the experience of the editor (Dr. Macphail, of Sautalia), who says that in eighteen years' practice in India he had never diagnosed a case, and who suggests that the simpler diet of the people is the cause of their immunity, is largely confirmed by a number of medical correspondents. This is pretty much on a par with our experience in China.

The following extract is from a letter written by Dr. McKean, of the American Presbyterian Mission, Siam :—

"At last the government has granted our request and has turned over to the mission a tract of land, comprising one hundred and sixty acres, for the purpose of a leper asylum. This land is the lower half of an island in the river some four miles below the city of Chiengmai. It is an ideal place in every way for the purpose intended It is now covered with jungle and uninhabited, but a portion of it can, without great expense, be brought under rice cultivation. About half of the land is suitable for rice planting. This, of course, is of great value, as it insures a considerable part of the food for a goodly number of persons. Other parts of the island are high and suitable for buildings We believe that the whole of the tract can be made to yield food for the people for whom it is intended by planting it. At no time since we became specially interested in the lepers, some ten years ago, have we been in a position to solicit funds for doing permanent work among them, because we had no assurance of securing land. Now that the land has been granted, we must ask our friends to assist us in beginning this work."

We need hardly assure Dr. McKean, who is one of "us," that he has our warm sympathy in this great undertaking. The great progress recently made in establishing Christian institutions for the care of lepers, is very remarkable. This has been especially true of India but we can think with satisfaction of the work done in China—in Pakhoi, Tungkun, Hangchow, Hsiaokan, and elsewhere. There is still a vast opportunity for such institutions in South China, where the disease is so common. The report of the leper home at Tungkun is very fascinating reading. Curiously enough just before reading it I had been hearing of the successful use in Singapore of a Turkish injection. This seems to have been tried too in Tungkun on a couple of cases with good results. It is prepared by Messrs. Kalle & Co., Biebrich, Germany, from the formula of two Constantinople doctors. It is an oily substance called Hastin. The price is not mentioned. It must be remembered, however, that similarly favorable reports of Rust's vaccine were published some years ago.

Profitable employments for lepers is always a great difficulty. At Pakhoi the men have for eight years been at work printing the Bible in the Cantonese dialect. The work of lace-making has been introduced by Mrs. Beauchamp amongst the women. They are said to be very skilful with the bobbin, and the silk and linen lace produced by them is sold after being carefully disinfected.

The China Missions Emergency Committee, which was formed in G. B. in connection with the China Centenary Conference, has resolved to help in establishing in China several medical colleges of the same rank as the Union Medical College in Peking. This will be done by supplementing the efforts of the missionary societies who are engaging in this work. It is felt that there is no way in which we can better show the healing and saving grace of Christ to the Chinese people than in training for them, under Christian influences, Chinese medical students by the thousand, who will bring relief to their maladies and sufferings.

C. M. M. A. IN ACCOUNT WITH THE PRESBYTERIAN PRESS FOR 1907.

Jan.	To 350 copies Jan. C. M. J and 6 photo blocks ...	$127.72
March	,, 350 ,, March C. M. J. and 10 photo blocks	137 04
April	,, 3 zinc blocks	24.84
May	,, 375 copies May C. M. J.	181.25
	,, photo blocks	9.70
July	,, 900 copies July C. M. J	189.95
	,, 3 half-tone blocks	14.10
	,, 4 line blocks etc	37.47
	,, 920 collotypes, duty, etc....	34.70
Sept.	,, 425 copies September C. M. J.	120.70
	,, 4 half-tone blocks	10.56
	,, collotypes	19.00
	,, 3 leaf aneurism reprint	55.45
	,, 100 reprint "Hodge Memorial"	4.40
	,, 625 fecal charts	4.60
Nov.	,, 550 copies Nov. C. M. J	144.77
	,, 2 zinc blocks	4.50
	,, half-tone blocks	1 14
	,, collotypes, duty, postage	49 72
Dec.	,, 475 copies January, 1908, C. M. J.	157.00
	,, 2 half-tone blocks	5.20
	,, 1 zinc block	2.65
	,, collotypes, duty, postage...	39.50
	,, 25 reprints	1.21
	,, Publication Committee four-fifths of surplus ..	204.89
	,, 3,000 wrappers for Journal	15.35
	,, stationery	15.05
	,, Printing resolutions of Conference and insets	13.54
	,, one subscription book	2.30
	,, minor invoices	2.78
	,, P. O. O. £ 0.17.4 for exchange *Lancet* ...	9.60
	,, postage for year	150.20
		$1,790.88

By balance, account rendered		$ 256.09
,, subscriptions	$1,268 93	
,, advertisements	286.98	
	$1,555 91	
Less 10 per cent	155 59	$1,400.32
By Balance		134.47
		$1,790.88

PUBLICATION COMMITTEE.

SUBSCRIPTIONS TO THE PUBLICATION COMMITTEE FUND.

A Nonny Mouse...		$204.08	
Dr. O. T. Logan		20 00	
Mr. Sidney Clarke		100.00	
Dr. Emma E. Fleming		5.00	
Dr. C. E. Blair		6.00	
American Hospital, Foochow, per Dr. Lyon		10 00	
Dr. Percy C. Leslie		5.00	
Rev. M. C. Mackenzie...		10.00	
Dr. W. A. Young		10 00	
Basel Missionary Society	£20	213 60	
American Board, A. B. C. F. M.	G. $100	215 95	
„ Church Mission		206.00	
Methodist Episcopal Mission	G. $100	217.68	
Dr. J. L. Scales, per Dr. Lambuth,	G. $200	435 37	
Per Dr. J. B. Neal:—			
John T. Boyd, Esq.	G. $ 50		108.84
Mrs. Henry McCormick.	G. $100		
Henry B McCormick	50		
	150=Tls.	242.91	
Sir Robert Hart, Bart,	„	500.00	
London Missionary Society	Gs. 10 „	83.47	
	Tls.	826.38	$1,767.52

Occasionally queries are received as to what hooks the Committee has prepared and placed on sale. Please note that this can always be ascertained *by referring to the inside page of the cover*. This list is kept up to date. Further information as to the Committee's plans will be found in the Report for 1907 sent out with this number of the JOURNAL.

The third reprint of the Physiology should be ready towards the end of May. Let me again emphasize the necessity of obtaining the English book, Halliburton's (Kirkes) Physiology. Without it this difficult subject will he extremely hard to teach. Men have even been kuown to give the Chinese translation to their hospital pupils and tell them to read it up themselves. As well try the Book of Changes. It is the most difficult subject in the medical curriculum aud requires to be taught in the most painstaking and clearest way, otherwise the students will get the book up by rote without understanding many parts of it.

It has been suggested that the Committee stock the origiuals of the books translated. It would be glad to do this if it could be sure of a sale for them. Meanwhile Mr. Edward Evans, 30 North Szechuen Road, Shanghai, will be glad to procure any hooks required. Let us he foresighted and order the books required long beforehand. Those needed for the autumn session should be ordered now.

I would like to advise new-comers not to touch our terms or hooks during their first year of study. They are too technical and had hetter he left to the studies of the second year. Chinese teachers, ignorant of Westeru medicine, are greatly puzzled hy them.

Several men have highly recommended the *Edinburgh Stereoscopic Atlas of Anatomy*.

Dr. Churchill writes:—"Next to dissecting this is the very best thing. We use it and are awfully pleased with it and recommend it to other teachers."

I saw it at home, and certainly the dissections stand out in very fine relief.

Dr. Cochrane mentioned that Underwood & Underwood's stereoscope gave hetter results than the instrument supplied with the photographs.

There are 240 plates, and the net price is £6.5. Second-hand copies can sometimes be had.

P. B. C.

Reports of Local Branches.

CENTRAL CHINA BRANCH.

Syllabus for 1908.

Feb. 19, Hospital Economics, the President. At Wuchang.
March 11, Clinical Meeting. At Wusenmiao.
" 25, Diseases of Women, with special reference to Out-patient Treatment, Dr. Glenton. At Hanyang.
April 15, Modern Research in Relation to Dysentery, Dr. R. T. Booth. At Concession.
" 29, Clinical Meeting. At Wuchang.
May 13, New Remedies and their Application, Dr. A. Tatchell. At Wusenmiao.
" 27, OPEN MEETING. The Missionary Side of our Work, Dr. G. Huntley. At Hanyang.
Sept. 30, Clinical Meeting. At Concession.
Oct. 14, Observations on Necrosis in Bone, Dr. T. Gillison. At Wuchang.
" 28, Report of Investigation Committee, Dr. J. MacWillie. At Wusenmiao.
Nov. 11. Clinical Meeting. At Hanyang.
" 25, Paper, Dr. R. Aird. At Concession.
Dec. 16, Recent Epidemic of Malaria in Central China, Dr. J. G. Cormack. At Wuchang.
" 30, Clinical and Business Meeting. At Wusenmiao.

We have held three meetings this year up till now, and a brief epitome of these may not be uninteresting.

The first meeting of the year was devoted to an address by the President, Dr. John MacWillie, followed by a discussion on Hospital Economics. All the members brought specimens of such things as handage cloth, cotton wool, lint, gauze, etc., etc., and prices and qualities were compared.

Dr. MacWillie showed how by our scheme of purchasing unitedly for this district alone we had probably saved $2,000 last year; he thought a larger saving might be effected in the future as the different markets became better known. He pointed out how we might save hospital expenses by stricter attention to purchase of such things as rice and coal, where lack of care often leads to our being cheated out of large amounts of money.

At our second meeting we had many interesting clinical cases. One of epilepsy, seemingly due to pressure irritation, was shown by Dr. Booth, and the members had an opportunity of witnessing three of the epileptic seizures while the case was being shown. The young lad was totally blind, but looked stroug and healthy; he gave a history of the trouble beginning with pain and vomiting.

Treatment by iodide had given slight relief, but latterly has lost its effect. There was pareisis of the right side, but both sides were involved in muscular spasm and contraction during an attack, though the right side was more marked.

Considerable doubt was expressed as to any benefit being gained by operation, and a course of treatment by bromides was suggested, and if that failed after a thorough trial, an exploratory trephine over the left Rolandic area should be attempted.

Our last meeting was also a clinical one. The following cases were shown and discussed:—

Dr. Tatchell. Sarcoma of neck in boy, inoperable, but an attempt was to be made to treat it with Colles fluid.

Dr. Huntley. (1) A case of irido cyclites and keratitis punctata in a boy. As no stigmata of inherited syphilis were present, a tuberculur origin of the trouble was suggested.

(2). A case of enlarged spleen in a boy, showing a distinct icteric tint in face and conjunctivæ. No anæmia. Abdomen swollen, but no free fluid present; no ova found in fæces, but as only one examination had been made, it was thought this was not conclusive. Santonin had been tried, but with no result. Kalaazar was suggested as a diagnosis.

Dr. Bretthauer showed a very fine specimen of a hydatiform mole; details of case will he seut to the JOURNAL, as such tumours are very rare.

Other cases of minor interest were shown and discussed.

J. G. CORMACK,
Hon. Sec. C. C. M. M. A.

Medical and Surgical Progress.

Pathological Notes

Conducted by JAMES L. MAXWELL, M.D.

The place of the Spirochæta Pallida in the diagnosis of Syphilis, by Alex. MacLennan, M.B., C.M.

I think the time has now come when the presence of the spirochæta pallida may be accepted as diagnostic, though it has not yet been proved to be the cause of syphilis. The reasou for this discrepancy, I hold, is that the S. pallida does not represeut the whole life cycle of the orgauism, but only a part of it. The failure to demonstrate the orgauism where the infective agent of syphilis must be present can only be explained by supposing that the organism theu exists in a different form.

The well-recognized disproportion between the numbers of the spirochætes and the intensity of the disease has given rise to some comment. The failure, therefore, to demonstrate tbe spirochæte is merely negative, and does not influence the diagnosis at all.

For clinical purposes the demonstration of the organism in a smear preparation is easy of application, though sometimes it entails considerable search. When the spirochætes exist in profusion tbis method is most successful, and in the early stage of the primary sore, before the secoudaries come out, a certain diagnosis may be made after finding the spirochæta pallida. Tbe presence of a single spirochæte does not of necessity make a diagnosis of syphilis, but on account of the ease with which the spirochæte are destroyed the presence of one specimen is of more significance than the demonstration of a single bacillus in a questiouable tuberculous lesion. I would even go so far as to say that the recognition of a siugle undoubted spirochæta pallida in a smear from a probable syphilitic lesion would place the diagnosis beyoud question.

The difficulty in the employment of the spirochæte in the diagnosis of syphilis is to diagnose the spirochæta pallida. To recoguize a typical specimen when lying side by side, say, with the spirochæta refringens is not difficult, but wheu atypical forms are met with, and when especially the preparation shows the fine, somewhat closely curved type of refringens, the matter requires some descrimination.

The technique of staining films is now so perfect that the preparation of the specimen takes only a few minutes, and can be done "while you wait" without unduly taxiug the patience. The discovery of the pallida in such smears influences treatment very considerably. If it be accepted, as I hold it ougbt to be, that the presence of the pallida is diagnostic, then the institution of energetic treatment is mandatory.

In practically all primary sores the presence of the pallida may be substantiated. As a rule these sores do not require such confirmatory evidence, thougb, as pointed out by Fournier, there is no certain sign or signs by which a diagnosis can be made. Therefore the vast importance of such an aid to diagnosis as finding the S. Pallida is apparent.

In the secondary lesions I have found difficulty in demonstrating spirochætes in film preparations.

In the tertiary lesions spirochætes have been repeatedly fouud aud

successful inoculations have been carried out from tertiary lesions, but for diagnostic purposes they are a negligible quantity.—*British Medical Journal*, 23rd November, 1907.

Note on the Spirochæte of Yaws (Spirochæta Pertenuis), by Aldo Castellani, M.D.

After describing the morphological characters of the spirochæte the writer continues :—

From the description I have given it will be seen that the yaws organism shows morphologically a great resemblance to the organism of syphilis. In fact I was for a long time of the opinion that the two germs differed biologically rather than morphologically.

I do not think that too much importance should be given to slight morphological details; the two organisms are certainly two different species, as syphilis and yaws are two different diseases. That syphilis and yaws are two different diseases has been proved beyond any doubt by the experimental researches of Charlouis in man and of Neisser and myself in monkeys.

Charlouis as far back as 1881 proved that yaws patients could be successfully inoculated with syphilis. Powell described two cases of syphilis supervening on yaws. Recently we have been able to demonstrate that monkeys inoculated with syphilis do not become immune for years and vice-versa.

The following facts are in favour of the S. Pertenuis being the specific cause of yaws :—

1. In the non-ulcerated papules, in the spleen, in the lymphatic glands of yaws patients, as well as inoculated monkeys, the S. Pertenuis is the only organism present. No other germ can be demonstrated, either microscopically or by culture methods.

2. The extract of yaws material containing the S. Pertenuis but—so far as our present methods of investigation permit us to say—no other germs, is infective to monkeys.

3. The extract of yaws material from which the S. Pertenuis has been removed by filtration becomes inert, and monkeys inoculated with it do not contract the disease.—*British Medical Journal*, 23rd November, 1907.

Gynecology and Obstetrics.

Conducted by KATE C. WOODHULL, M.D.

CASE OF FETUS COMPRESSUS.

Exhibited by Dr. Charles B. Reed at the Chicago Gynecological Society, September 20th, 1907.

Patient aged 36. Delivered in the Chicago Lying-in hospital service in July, 1907. No history of twins previously. The mature child was born living and weighed twelve pounds. The fontanelles were almost closed. The "fetus compressus" measures 4 c.m. x 2.5 c.m. and was approximately two months old at the time of its death. There were no external manifestations of the death of the fetus that could be learned from the patient.

Frequency of Fetus Compressus. In one series four instances were observed in 475 cases of labor; one fetus being macerated, the others normal.

Cause of death in these cases may be summarized as follows: 1. Interference with circulation. 2. With single chorion, for instance, the conditions regarding nourishment are quite difficult, and one egg must suffer. 3. One twin grows faster and absorbs the nourishment

of the other. 4. One egg may be accidentally injured, as by a knot in the cord, or by disease, and slow death follows.

Post-mortem Changes. The liquor amnii is absorbed. The fetus is compressed flat. The post-mortem changes are most pronounced the earlier in the pregnancy the death occurs. Sometimes the twin egg is found merely as a yellowish or white flake, and might possibly be mistaken for an infarct on the placental margin.

These cases of course are not certainly diagnosed, but the larger ones may he definitely differentiated. In later months the bones of the child resist compression after death and a macerated child will be found.

When the injury is not mortal we find cases of deformity such as acardia, acephalus, etc., depending on the time, the location, and the extent of the injury.

The effect on the pregnancy may or may not be pronounced. Occasionally the pregnancy is interrupted, hut usually the pregnancy goes on to term. Transient hemorrhage may occur, but at the time of fetal death, and the diagnosis can only be after labor, when the time of the hemorrhage and the size of the fetus can be correlated.

In labor the dead twin sometimes causes difficulty in diagnosis, or two habes from triplets may be compressed as Bock and Reuss have observed, while v. Lichen reports the case of a fetus papyraceous that was born before its fellow. Becker saw one expelled on the fifth day after labor.

The practical significance of these cases rests on the fact that the compressed fetus may remain unnoticed in the uterus after the expulsion of the living child. Cases have been reported where the woman died of postpartum hemorrhage and the post-mortem revealed a retained "fetus compressus" as the cause of the atony.—*Surgery, Gynecology and Obstetrics*, January, 1906.

LACERATIONS OF THE PERINEUM.

A very carefully prepared paper on this subject by Ellice McDonald with 48 illustrations, read before the New York Academy of Medicine, October 25th, 1907, is reported in full in *Surgery, Gynecology and Obstetrics*, January, 1908. Some of the more important points are as follows: In giving the history of the operation it is stated that, The first historical reference to the subject is found in an early work, author unknown, that Tortula, a midwife attached to the school of Salernum, who lived in the eleventh century, cured a laceration of the perineum by operation. Causes of perineal laceration: 1. Too rapid expulsion of the child, so that tearing of the perineum instead of stretching results. 2. Relative disproportion between the presenting part and the parturient outlet. 3. A faulty mechanism of labor whereby the largest circumference of the head passes the perineal ring. 4. The use of forceps.

Rapidity of delivery is without doubt the most frequent cause of perineal laceration. This is particularly seen in those cases of precipitate delivery where the head comes through the birth canal rapidly and impinges upon the perineum with almost the force of a blow. The passing of the head through the perineal outlet should undoubtedly be retarded until the parts have been softened and stretched. A preliminary digital stretching is most useful in primiparæ; although often a painful procedure, it can, however, be done during the labor pains and is a means of stimulating their force and frequency.

A frequent cause of perineal laceration is the pressure of the head upon the perineal body and the lack of retraction betweeu the pains. The maternal parts become bloodless and tense and tear readily with further descent of the head. An additional factor in the productiou of this conditiou is the attempt to control expulsion by pressing the taut perineum against the cinciput. This wounds the perineum and aids in the production of the enemic condition. The advanceiuent of the head should be controlled without making any pressure upon the perineum.

Strong pains are a definite factor in the production of perineal injuries, but may readily be controlled by chloroform.

The use of forceps as a causative force is one which varies very much with the methods of different operators. The harm they cause depends upon: (1). The kind of forceps used and (2) upon whether the operator delivers the head with the forceps or not.

Forceps with the long blade like Simpson's may cause laceration of the perineum in two ways. First, directly on a backward pull by the breadth between the shanks where they join the handles, which unduly stretches and wounds the outlet at a level with its greatest frailty, the posterior fourchette. Secoud, the blades themselves do not closely approximate the fetal head, and the edge of the blade extending beyond the head, impinges upon the vaginal floor and is forced into the tissue. This condition is quite coumou when the attempt is made to deliver the head through the ring without removing the forceps. When the handles of the forceps are turned upward in order to extend the head, the blades, not fitting the head, but grasping the parietal processes firmly, turn upon these eminences as upon a pivot, with the result that the point of the blade extends beyond the head and impinges upon the pelvic floor. Further descent of the head drives the point into the tissue aud starts a laceration. In such a condition it requires but a small beginning of a tear in the mucous membrane to result in a large laceration.

The secret of the avoidance of tears in forceps delivery is the use of proper forceps and the removal of the forceps as soon as the head can be controlled by the hand.

The author has made trials by practical use of many models of forceps and has finally come to use solid blade forceps after the Tucker-Meclane model. These forceps fit the head well, cause little traumatism to the vagina and perineum, aud are easily applied without causing abrasions or injury. The best types of these forceps are the Oragin and the Mcdonald models, made by Tieman, New York. These forceps may be applied and the head drawn down until it can be controlled by pressure upon the forehead between the coccyx and the anus. No attempt should be made to deliver the head without removing the forceps.

With the acquirement of skill and the use of proper forceps, there is no reason why there should be more lacerations directly due to forceps in instrumental deliveries than in non-instrumeutal deliveries. The head may be delivered as slowly and as much care taken as in non-instrumeutal deliveries.

A frequent cause of perineal lacerations which is often credited to the forceps operation is the traumatism done by the ineffectual labor pains pressing the presenting part against the pelvic diaphragm. The presenting head should not be allowed to remain upon the perineum without advauce for more than an hour and a half, and usually not that long.

Correspondence.

EDITORS OF JOURNAL.

A Snapshot from Peking.

DEAR DR. JEFFERYS: The CHINA MEDICAL JOURNAL for March came by this morning's mail, and in looking it over I noted your article on "Kodaking for Small Game". In it were the pbotomicrographs and drawings of your "perplexity". I am writing to throw some ligbt on these, if possible. I think that there is no question tbat what you describe are the compound gonidia of one of the members of the order uredineæ, i.e., the so-called rusts, a group of fungi. These gonidia, or conidia, or teleutogonidia vary in color from light yellow to almost black, and are one to many celled, the septa being transverse or both transverse and longitudinal. Each cell has a double outline due to its thick wall and there is usually a constriction where two cells join. There is often an oil globule (?) in the center of each cell. The compound gonidia are attached to the mycelium on which they grow by a "stem" which has cellulose walls and is doubtless the "neck-like protuberance", which has "either a pair of lips or a slit-like opening communicating by a tube with the upper compartment". As you will see this description fits the tube-like "stem" by which the gonidium is attached to the mycelium. This "stem" is brittle and breaking off scatters the spores. The point at which it breaks gives the variation in the picture presented. I hope that this description will be of some help. If you can refer to some work on cryptogamic botany, you can probably discover the genus to wbicb your "hinsect" belongs.

While in college I spent two years with cryptogamic botany under a man who was considered an authority, especially on the rusts and smuts. It is now nearly ten years since I have looked at my old friends and I find that I have none of my notes nor books containing keys for determination of genera and species. That is comparatively unimportant, as these organisms are not pathogenic so far as I know. While in medical college I was struck with the fact that while bits of vegetable tissue, mould-spores, and the like are very frequent in stools, practically nothing is said about them in books on clinical diagnosis except a general warning not to be deceived by them. As cellulose is not digested, it must pass through the alimentary tract and appear in the feces. Plant tissues are as varied as animal, and unless one is familiar with these varieties, many mistakes are likely, or time is spent in retracing ground already very familiar to botanists.

I am a little puzzled by your expression, "It is always alive". The spores wbich I describe are not motile, and could only appear so when carried by diffusion currents on the slide. They doubtless are alive at the time you observe them, and many mould spores can be made to germinate on artificial culture media. I wrote my college graduating thesis on cultural methods for saprophytic fungi, and in the course of my work devised a satisfactory moist cell for such work. It is merely a block of wood about three by two inches and an inch thick. In the center is a cavity covered by a large oblong cover-glass and with a "slide" for tbe bottom. A hole about ¼ inch in

diameter is bored in one end to allow inoculation of the medium, which is spread on the cover-glass. This hole is plugged with cotton. The whole apparatus is, of course sterilized previously. This block can be placed on the stage of the microscope and the germination and development of the spores observed. For the work in question probably the ordinary "hanging drop slide" would do perfectly well. As to culture medium, moulds in general like acid, rather than alkaline, reaction, but here, as with bacteria, there are saprophytes and also strict parasites, so that it is sometimes impossible to grow them artificially. A good medium for general use is a *prune* decoction solidified with gelatine or agar-agar.

I might mention along this line another instance which appeared in the JOURNAL and which I did not write about for lack of time. I have not my file of JOURNALS at hand to refer to the special number. It was an article in which the author thought that he observed pieces of liver tissue in the stools. Such tissue is likely to be digested by the intestinal juices, or decomposed by the bacteria there resident, before it could appear in the feces, and there are forms of vegetable tissue, that to some degree resemble liver parenchyma (and also called "pareuchyma" from the predominance of thin-walled cellular tissue) and which might easily be mistaken for the former by one not familiar with plant histology. I am of the opinion that in the case I mention, such a mistake was made.

If you find the bodies you describe in a patient's stool repeatedly and in large numbers, I should suggest that you examine the articles of diet and see whether you do not find it to contain these spores and perhaps the mycelium also.

Perhaps all my remarks are wide of the mark, but I hope you will take them for what they are worth, as an attempt to help you solve your puzzle. I wish I had more time for investigation, but I am just beginning to teach in Chinese after being here three years and I find my hands more than full with this and other duties that I cannot put aside.

Dr. C. W. Stiles, to whom you sent your specimen, was lecturer on Medical Zoology at Johns Hopkins University while I was there, and I shall be interested in his verdict. I remember the day when he announced to our class the discovery and naming of Uncinaria (or Anchylomastomum) Americana, in which he has been so much interested since.

Cordially yours,

CHARLES W. YOUNG, M.D.

P. S.—In your photomicrography I think that you will get better results and cut down the time of exposure if you discard the use of the the microscopic eye-piece and the camera lens. Neither is essential, though the latter enables you to increase the magnifying power. You will see this if you glance at the optics of the case.

UNION MEDICAL COLLEGE,
PEKING, March 31st, 1908.

The "Onions" of Statistics.

DEAR DR. COUSLAND: Herewith statistics, such as they are. It is a convenience if two blanks are sent each time, so that a copy is preserved in the same form, though that is a small matter.

Though the difficulties of reporting on the religious aspect of the hospital work are evident, and have oft been discussed, it nevertheless seems to me that it might

be well to make some sort of an effort at it, as, e.g., *number of full days instruction given by Chinese* and ditto *by foreigners*. The fraction of a day given often by one or more foreigners would thus appear and the parts of days given by medical assistants or others. However it may not be wise, though I for one would like the information, and I can see that to merely call for the number of religious workers, or the number of "converts" would be very misleading. Even in calling for the number of days' religious effort it would have to be remembered, as Dr. A. H. Smith would say, "There's a differeuce in onions."

With best wishes, and this would be my valentine if I had thought quickly enough to date it yesterday.

Sincerely,

FRANCIS F. TUCKER.

P'ANGCHUANG, February 15th, 1908.

EDITORS OF JOURNAL.

Tuition at the U. M. C., Peking.

DEAR SIRS: I send you a copy of a letter which I sent to Dr. Neal some time ago, and also extracts from a letter sent by him to a friend in Shantung in reference to my letter.

I would not have sent these had it not been that Dr. Roys has written to you on this subject and I think it is necessary that friends should know a little more about this proposal of ours.

We feel more and more strongly that one medical school for North China is quite enough in the meantime, and this year's experience in seeking men for the entrance examination is confirming more emphatically than ever the third point in my letter to Dr. Neal. Although we are getting students from different parts of China we have great difficulty in getting a sufficient number of men for our entering class.

I do not understand Dr. Roys' calculations. Our fees for resident students are only $8 per month, with a few very trifling extras, amounting to about $5 per annum. And any one who tries to do efficient work will soon find that such a fee means working at a very heavy loss.

Yours truly,

THOS. COCHRANE.

PEKING, February 22nd, 1908.

EXTRACTS FROM LETTER FROM DR. COCHRANE TO DR. J. B. NEAL.

Besides all this there are practical difficulties which we have had some experience of, three of which are specially worth mentioning:—

I. *Cost.*—We have spent about 80,000 taels on our scheme here, and we shall have to spend a good deal more in order to keep the institution in a position which will enable us to hold our own against the proposed institutions of the Chinese and obviate the unpleasant alternative of being snuffed out by an awakened Board of Education.

II. *Staff.*—We find notwithstanding the large union which enables us to gather a considerable staff, that with language difficulties, furloughs, sick leave, etc., we have the gravest difficulties in carrying on the work.

III. We are very anxious that most of our students, as at present, should be Christians, but without a very wide field to draw from the supply cannot be kept up. You speak, I think, in your letter to Dr. Ingram about large classes, but it is most unlikely that we shall have large classes. We have fifty students at present it is true, but that is because a large number of mission students were waiting to enter the college. Missions cannot keep supplying any very large number of students to study medicine, and it is very difficult to get outside students well enough up to pass the entrance examiuation.

EDITORS OF THE JOURNAL.

SIRS: Might I be permitted, though not a medical missionary, but as one who is much interested in their work and in the cause of medical education in China, to comment upon the letter of Dr. C. K. Roys in your January issue. He is evidently against the idea of any coalition between Shantung missions and those in Chihli, and while he admits that the Peking Medical College is doing splendid work, his faith in the motto that "Union is Strength" is not strong enough to permit of his taking further part in helping to make this school a practical success. I know nothing about the finances of the Western Shantung Mission, but on the face of Dr. Roys' letter they seem insufficient to allow that mission to start a medical college, not only in means but in teachers. Medical education on Western lines is in its infancy in China, and the present time is most important because the fair name and fame of the whole system will depend on the quality of the first batches of graduates. Although I have had no communication with Dr. Cochrane on the subject I heartily endorse every word in that paragraph of his letter quoted by Dr. Roys. It would indeed be nothing more or less than a "grave strategical error" at the present juncture, and for this reason, viz., that it is impossible to start fresh colleges and give a thorough, sound, up-to-date education on anything like the staff that could be raised in such places as Western Shantung; while, at the same time, it is near enough to Peking to send men able to give short courses of lectures in an already established school. I have no wish to be personal—Dr. Roys' and Dr. Neal's names are too well known to let me make myself misunderstood in this direction—but not every medical missionary is competent to be a medical educator, and, in mere point of numbers, however capable these men are there are not enough of them to give sufficient attention to the running of a proper medical school. If such a school is to be anything more than an ordinary set of ambulance classes it will require a much larger staff than is at present available in Western Shantung. In Peking there are all the English and American medical missionaries (a proportion of them appointed with special reference to teaching in the U. M. college); in addition there are medical men fresh from the teaching centres at home who live in the college and give their whole time to it. There are also extra-mural teachers and examiners drawn from the Legation medical officers in Peking and from medical missionaries in the surrounding country. Even with this staff the college still finds itself undermanned and looks forward to the day when it will be able to avail itself of the help of some of its graduates.

Peking and Shantung.

The expenses of running a medical school are very great indeed. Microscopes, expensive anatomical models, hooks, apparatus and materials for practical work, laboratory outfits, heating and lighting, etc., etc., are such as tax to the utmost all the funds that Dr. Cochrane can collect. The sources of these funds are far from being inexhaustible, and no matter how good a thing it may be to have a "school at Tsinanfu to be provided for on a generous scale" Dr. Roys will soon find such support is not so readily forthcoming as one would at first sight imagine. There is a considerable amount of apathy among the Chinese as regards financial help and especially so to schools man-

aged by foreigners. Medical education is not a thing of creeds and sects, and those who open colleges should only do so after serious consideration of this point as to whether or not they will impose a religious test. If they do not do so it will limit their financial support from home, as subscribers to mission work abroad usually like to know their money is being spent to help the spread of the Christian propaganda, and the college is thus thrown more on the hands of the Chinese for its upkeep. In this case the college authorities would look to the whole tone of the institution to have an ameliorating influence on the character of the students. If, on the other hand, the test is demanded the usefulness of the college is restricted, as it debars all students (e.g., those who might be sent by government to prepare themselves for entrance into the army, navy, etc.) who, while willing to receive the education, are not prepared to submit to any such test.

Having watched the struggle for upkeep in an unendowed institution, such as the Peking U. M. C., I can assure Dr. Roys he will not have his troubles to seek in a similar undertaking in Shantung. I would respectfully advise him to consider the two items of men and money before he embarks on his scheme and to what extent he is justified in tapping the streams of help and diverting them into rills. Has he enough medical men at his command to efficiently undertake to carry students through a five years' course of study and all the many subjects entailed—anatomy, physiology, pathology, bacteriology, medicine, obstetrics, surgery, clinical instruction, etc., etc.? If so, has he enough means to build a college and equip it? If not, would it not be a better course to lend his aid to the strengthening of the Peking U. M. College at the present time when it needs all the help it can get? If he throws his bread upon the waters in the shape of sending not only teaching help, such as Dr. Neal could give, but students from Shantung, he may be sure he will reap a substantial reward when these men return qualified graduates, who will be able to give him the assistance that he will find himself very much in need of when the Tsinanfu college opens its doors.

One of Dr. Roys' chief objections to the Peking school, so far as sending his Shantung students is concerned, is on the score of expense. One may hope he has gone into the other objections more thoroughly than on this point; the fact being that instead of his assertion that $250 a year would be a conservative estimate of the amount required for each student it only costs $77 (seventy-seven) a year to educate a student in the U. M. College. The fees are $8 per month (the college 'annus' being one of nine months), plus a sum of $5 a year for the extra expenses of practical classes. The sum of $8 a month includes board as well as tuition.

I am, Sir, yours faithfully,

G. DOUGLAS GRAY, M.D.

PEKING, February 19th, 1908.

Dr. Fowler on Furlough.

DEAR DOCTOR: Thanks for yours of March 26th, 1908. Within a fortnight we begin our flight homewards.

By my return I shall probably have made the acquaintance of Manson, Cantlie, John Hutchinson and other authorities. It will at least be interesting to compare notes on various forms of diseases met with in Central China.

I am promising myself a three month's course at the school of tropical medicine. It is becoming increasingly necessary for all of us to keep ahreast of every branch of our profession. In our inland cities, with many calls upon our sympathy and time, we are apt to grow rusty on the bacteriological side of the work.

While we are bringing healing to the masses in China others, however, in other lands are busy at work in their special branches. Since I left the homeland the true sources and treatment of malaria have been discovered aud many another thing besides. Shall we ever discover a specific for leprosy, I wonder!

I go home a wiser man than I came. Like many another worker in bacteriology, I thought at one time that I had *the* treatment up my sleeve.

It is good to know one's limitations and I humbly and frankly confess mine after persistent contact with, and treatment of, leprosy for over eight years.

The photograph A [See Frontispiece.] is rather an interesting case which I had under observation for over three years. Some describe the condition as syphilo-tubercular-leprosy. I have always disputed this term.

I am quite convinced that the syphilitic lesions are distinct from those of leprosy, and that the term is quite misleading on this account if for no other.

Unfortunately the specific treatment for the tertiary manifestations of syphilis exaggerate and seriously complicate the leprous subject.

I regret to say that this poor fellow died of leprous intoxication a week or two after being photographed. I should like to give you some account of this toxic condition, but I must reserve it for another occasion. In the leper hospital attached to our leper home can always be seen men dying from sheer inability to combat the poison of their disease. For us as medical missionaries there is great satisfaction and thankfulness in the fact that ere they die many of the men develop traits of character which would put many a home Christian to shame. The majority of our inmates readily take in the main truths of Christianity, and by their cousistent lives do much to commend the religion of Christ to those heathen who are brought into immediate coutact with them.

Photo. B you will readily recognise as a typical case of tubercular leprosy. I think the photo brings out everything that can be put down to this type of the disease. Leprous keratitis deprived the poor fellow of his sight, and he now awaits the Home call with tbat dumb patience which comes to the sightless.

I shall try to give you a call when passing through Shanghai. Meantime, believe me, with kind regards,

Yours sincerely,

HENRY FOWLER.

P. S.—I send also a cut of our new leper chapel and anotber of the blind leper being led by an inmate fast becoming sightless himself.

The chapel is huilt of dressed granite (imported from Hunau) and our ordinary blue bricks. The building outside and in is neat and pretty. Unlike many of our inland churches, it too is "worshipful". Perhaps I may be allowed to say that the chapel is the gift of my beloved colleague, the Rev. Arnold Foster, B.A., of Wuchang, than whom there is uo better frieud to the leper in China.

THE NEW CHAPEL, HIAO-KAN,
1907.

BLIND LEPER BEING LED BY ANOTHER LEPER ALMOST SIGHTLESS.

DEAR DOCTOR JEFFERYS: I have had good business in warm stages and have sent out thirteen in all. Recently I have found that if the brass strip is smeared with balsam and then heated quite hot over an alcohol flame, the plate glass sticks nicely and the adhesive plaster shown in the cut in the January JOURNAL can he dispensed with, as the moderate heat required for examination of amœhæ does not cause the balsam to run if thus treated with previous heating.

More Warm Stages to be had.

You might inform your readers that I cau supply a dozen or so additional workers with these warm slides if they will get in their orders before the middle of June. I leave Shanghai on furlough the fourth of July on a British steamer!

Yours sincerely,
O. T. LOGAN.

March 27th, 1908.

EDITOR OF JOURNAL.

DEAR SIR: I write to draw your attention to the paragraph under Notes of the CHINA MEDICAL JOURNAL for March (p. 123), which has just reached me.

A Correction.

You are not correct in implying that the Dublin University Missious have taken up this work. They have *not* done so. All that they have done is to set Dr. McKenzie, at his own request, free from certain work in the T'uh Ning Prefecture and have permitted him to be on the staff of the school that the *C. M. S.* are openiug in Foochow and to reside in Foochow.

It is not Dr. Sangster but Dr. Sanger who is to be on the staff.

It is most doubtful if the school will be opened in the autumn of this year.

The ground is not yet purchased (or was not a few days ago). Plans for the new building have to be forwarded home for approval aud sanction before the building can be commenced.

For these reasons alone, not to mention others, it is almost certain that the new school will not be commenced this year.

I remain, yours truly,
B. VAN SOMEREN TAYLOR.

HINGHUA, April 2nd, 1908.

EDITORS OF JOURNAL:

DEAR SIRS:—With regard to the terms "lady physician" or "woman physician" may I suggest a substitute, namely "DOCTORA," pronounced with the emphasis on the second syllable. It is shorter, euphonious, and would be understood by those who hear or see it for the first time, even in its abbreviated form "DRA." as prefixed to a surname.

A New Name.

It can be used in the third person as "a new doctora has come to our city", or in the second as "Good Moruing, Doctora".

Though a little long, it is no longer than Madamoiselle, Signora, Baroness or Machioness. What is wanted is the feminine of 'Doctor' or 'Physician', and this is the most natural one I can think of, being more euphonious than "Doctress". Persoually I prefer the word "Doctor" to "Physician" as the common appellation for those who practice the healing art, and its feminine is more easily formed. This term would also be convenient for married couples, oue or both of whom are medical, e.g.:—

DR. and DRA. X,
DR. and MRS. Y,
REV. or MR. and DRA. Z.

The above term being both feminine and professional, people would be less likely to "forget" to give their due to our sisters who have earned and 'paid for' the privilege of joining the medical professiou.

Yours sincerely,
FRED. H. JUDD.

JAOCHOW, April 9th, 1908.

Personal Record.

MARRIAGES.

At Hongkong, 28th December, 1907, Dr. PHILIP REES, W. M. M., Wuchow, to Miss ETHEL CRASKE, of Chelsea, London.

At Shanghai, 16th February, Dr. HERBERT STANLEY JENKINS, B. M. S., Sianfu, to Miss M. L. (Daisy) LOVERIDGE.

At Shanghai, 17th March, Dr. J. W. HEWETT, to Miss D. CONYERS, both of C. I. M.

ARRIVALS.

February 24th, Dr. and Mrs. GEO. C. WORTH and family, S. P. M.; Dr. and Mrs. C. H. BARLOW, A. B. M. U.; Mrs. J. B. FEARN, M. E. M. S.

20th March, Dr. ELLEN FULLERTON, A. P. E. C. M.

DEPARTURES.

12th February, Dr. JEAN DOW, C. P. M., for Canada.

28th February, Dr. C. J. DAVENPORT, L. M. S., for England.

6th March, Dr. J. G. CORMACK and child, L. M. S., for England.

— March, Dr. and Mrs. J. L. MAXWELL and family, for England.

— March, Dr. and Mrs. LAYTON and family, for U. S. A.

20th March, Dr. and Mrs. SYDNEY H. CARR and two children, C. I. M., for England, via Siberia.

24th March, Miss M. A. MACKEY, M.D., A. P. M., for U. S. A., via Switzerland; Dr. and Mrs. J. H. MCCARTNEY, M. E. M., for England.

30th March, Dr. and Mrs. T. COCHRANE and family, L. M. S., for Scotland.

A CASE OF MOLLUSCUM FIBROSUM.

[See Page 225.]

The
China Medical Journal.

VOL. XXII. JULY, 1908. NO. 4.

Original Communications.

[All copy must be in the hands of the Editors one month before date of publication to insure appearance in the following number. The editors cannot undertake to return manuscripts which are sent to them. A complimentary edition of a dozen reprints of his article will be furnished each contributor. Any number of reprints may be had at reasonable rates if a *written* order for the same accompany the paper.]

RESEARCH COMMITTEE.

First Interim Report, March, 1908.

PROLOGUE.

For the sake of members who have joined the Association since the general meeting in May, 1907, and for others whose attention has not so far been directed to this branch of our work, we would take this opportunity of reviewing the position of our Research Committee.

The honour of being the first to recognize the importance of investigating the diseases more particularly prevalent among the Chinese belongs to the Mid-China branch of our Association, which formed a Research Committee early in 1907. The subject of scientific investigation was under discussion at the General Meeting of the China Medical Missionary Association in May, 1907, when it was decided to form a committee for carrying on research work. It was further agreed that as the Mid-China branch already held the field, the subject that branch had already decided on should be made the matter for general investigation throughout the Association until its next general meeting.

The subject thus chosen was that of investigation into the fæces with special reference to the presence of worm eggs, amœbæ, and other morbid manifestations.

It was decided at that time to attempt to publish an interim report at the beginning of the present year. The Chairman offers his apologies to the members that this report has been somewhat unduly delayed,

partly owing to unavoidable causes which prevented him from finishing the work sooner and partly owing to the late date at which he received other members' contributions.

It was hardly to be expected that after a few months' work only we could produce a very satisfactory report, but we believe that there is sufficient in this preliminary report to encourage members to persevere with the work in hand, and we trust to call the attention of others to the necessity of their giving a hand. I should add that the Mid-China branch had expected to be able to join in this report, but death and sickness among its members has now made this impossible.

Lastly we would greatly desire to publish a second report at the beginning of 1909, and for this would beg of members to let us have their reports and figures not later than December of this year. Such reports to be sent to the Editor, Dr. Jefferys, who will forward to me.

The contents of this interim report are :—

1. Report of Drs. Jefferys and Day, Shanghai.
2. Report from Dr. G. Duncan Whyte, of Chaochowfu.
3. Report from Dr. James L. Maxwell, of Tainan, Formosa.
4. Report from Dr. H. H. Weir, of Chemulpo, Korea.
5. Statistics for Dr. Plummer, of Wenchow.
6. Statistics for Dr. J. Preston Maxwell, of Eng-chhun, Fokien.
7. Summary and Remarks by the Chairman.

Extract from the Report for 1907, Pathological Laboratory, St. Luke's Hospital, Shanghai.

INFECTION WITH ANIMAL PARASITES IN 500 STOOLS (INCLUDING DR. OLSEN'S 50).

NAME.	Our cases of Total Infection.	Dr. Olsen's cases of Total Infection.	Grand Total.	Per cent.
Ascaris lumbricoides	247	26	273	54.6
Trichocephalus dispar (trichiuris)...	111	9	120	24.
Ankylostoma duodenale	25	2	27	5.4
Opisthorchis sinensis	2	...	2	.4
Fasuolopsis buski	2	...	2	.4
Oxyuris vermicularis	1	1	2	.4
Strongyloides intestinalis	1	...	1	.2
Cases with positive findings	275	30	305	61.

W. H. JEFFERYS, M.D.
ELI DAY, M.D.

[For full report, see CHINA MEDICAL JOURNAL for March, 1908.]

Notes on the Results of Investigation of Faeces in the Chao-chow-fu Prefecture, Canton Province.

By G. DUNCAN WHYTE.

Considerations as to Age-incidence.—In regard to opisthorchis sinensis:—Of 218 examinations made in the case of individuals over eighteen years of age, the ova of this fluke were found 42 times (19.2 per cent), while of 39 individuals below eighteen years, only one showed these ova (2.5 per cent.).

The youngest individual showing infection with ankylostoma duodenale was aged nine. Five examinations were made in individuals below that age. Between the ages of nine and fourteen (inclusive) fourteen examinations were made, and a half of these cases showed ankyl. duoden., that is, 50 per cent. The difference between this percentage and that for infection with the same parasite amongst cases of all ages and occupations (i.e., 56 per cent.) is too slight to have importance attached to it, considering the small number of cases on which it is based.

In further investigation as to the period of age-incidence in cases of this infection, attention was confined to those of one class—the farmers. It was found that of these twenty-seven were not infected with the worm, and their average age was thirty-two years, eleven months. Of the eighty-seven infected farmers the average age was thirty-three years, a difference from which no reliable deduction could be drawn. It did not seem likely that any investigation into the age-periods of infection with ascaris lumbricoides, or tricocephalus dispar would lead to any information of value.

The largeness of the percentage of farmers infected with ankyl. duod. may be due to one of two causes, viz., either (1) the distance he would have to go to secure a drink of boiled water (tea) when he is engaged at his work, and his consequent indulgence in water that none of the other classes of men would be persuaded to drink, or (2) to his frequently being infected with the larvæ through the skin as he works with his feet in diluted fæces. The fact that the larvæ are not acting in a very concentrated mixture (as in most laboratory experiments) might explain the absence of a history of an inflamed condition of the skin.

The relatively low percentage of infection with opisthorchis sinensis shown by farmers, servants, boatmen, artisans, and others—i.e.,

the less wealthy individuals—as compared with the larger percentage of infected individuals (40 per cent.) amongst the richer literary and business classes, suggests that infection is not conveyed through unboiled water, insufficiently cooked food—or rather improperly cooked food—or any of the cheaper vegetables (such as the common leek and garlic so indubitably incriminated by Dr. Preston Maxwell in an article on Round Worm Infection. J. T. M. 1900). The fact that the infection with this parasite varies inversely with infection with the other three parasites here referred to is very suggestive of the medium of infection being totally different in the case of this particular parasite from the medium used by the other worms.

Liter. and Business,	Ascaris 57	Trico. 70	Ankyl. 25	Op. Sin. 40
All others,	Ascaris 75	Trico. 75	Ankyl. 60	Op. Sin. 11

It is interesting to note that both the individuals found to be infected with Dist. Crassum lived in the "Southern suburb" of this city. Ten more individuals have been examined from the same suburb, but showed no infection with this worm.

In connection with the *symptoms resulting from infection with these worms*, it may be noted first, in regard to opisthorchis sinensis that out of the 114 farmers 21 have symptoms of gastro-intestinal disturbance, and of these five show infection with op. sin. (24.8 per cent.), while 93 individuals did not complain of such symptoms, and of these only 11 (11.8 per cent.) showed the presence of op. sin.

A similar deduction is to be drawn from the 126 non-farmers over thirteen years of age. Out of 23 individuals complaining of the foregoing symptoms seven show infection (30.4 per cent.), while of the 103 who did not complain of these symptoms, only 20 (19.4) were infected.

In regard to ankylostoma duodenale, out of the 114 farmers 18 complained of symptoms of anæmia, and of these 16 showed the ova of auk. duod., 96 made no such complaint, and of these only 69 were infected; the percentages of infected individuals being, amongst the anæmic, 88.8 per cent., and amougst the non-anaemic—or rather non-complaining—71.8 per cent. infected with ankylostomes. Amongst the non-farmers it was fouud that amongst those complaining of auæmia fifty per cent. were infected with auk. duod., while amongst the "non-complaining" only 36.6 per ceut. were iufected, but these figures are based on only a small uumber of infected individuals.

ANALYSIS OF RESULTS OF INVESTIGATION OF FÆCES IN THE CHAO-CHOW PREFECTURE OF THE CANTON PROVINCE.

Occupation.	Parasites' Ova Found.						
	No. of Cases.	Ascar. Lumb.	Trico. Disp.	Ankylo. Duoden.	Opisth. Sinen.	Distom. Crass.	None.
Farmer	114	83	87	85	16	1	1
Student	19	12	11	2	8	...	2
Business	28	18	22	10	11	...	...
Servant	15	11	12	9	1	...	...
Boatman	7	3	3	...	1	...	3
Artisan	17	15	15	4	2	1	...
Others	15	14	12	7	2	...	1
Unknown	42	31	28	21	2	..	1
	257	187	190	138	43	2	8

The figures being arranged to show percentages, and the individuals gathered into larger groups, the results are as follows:—

	No. of Cases.	Percentage of individuals infected.					Uninfect.
		A. L.	T. D.	A. D.	OP. S.	D. C.	
Farmers	114	72.8	76.3	74.5	14.0	.8	.8
Student and Business	47	63.8	70.2	25.5	40.4	...	4.0
Boatmen	7	43.3	42.3	...	14.0	...	43.0
Others	47	85.1	83.0	42.5	10.6	20.0	2.0
Unknown	42	73.8	66.6	50.0	4.6	...	2.3
Total...	257	72.7	74.6	54.0	16.7	0.76	3.1

Report of Faecal Examination of 1,000 Cases Male and 50 cases Female at the Mission Hospital, Tainan, Formosa.

By James L. Maxwell, M.D.

I. 1,000 CASES MALE.

The total infected of these cases was 905. See statistics appended. As a matter of fact the actual number should probably be rather larger than this. For the sake of comparison I originally drew up my statistical tables for each 250 cases. On looking over these I note that the percentage of infection hy each worm rises slightly from the first to the second and the second to the third sheet, while the numbers in the third and fourth sheet vary very little indeed. This, I take it, implies that with practice a single egg in a slide is recognised while in the earlier part of the investigation some of these escaped my attention. Had the numbers heen the same in the first two as in the last two sheets the total infection would have amounted to 936, which is probably nearer the true figure. Then there were quite a number ot cases which within a month or two of the examination had, with or without drugs, passed round worms and now showed no infection. It is therefore no exaggeration to say that practically the whole population is infected with intestinal parasites.

No eggs were discovered belonging to any other worm than the three common ones—the ascaris lumbricoides, trichocephalus dispar and ankylostomum duodenale. On two occasions the oxyuris vermicularis was found in the stools. This worm, though present among the Chinese here, does not seem to be very common. With the experience of these and many other cases, and further after careful inquiry among native physicians, I believe I am justified in saying that tapeworms are absent from this region.

No eggs of intestinal distomata have been found here, a rather curious thing, seeing how very common the infection with opisthorchis sinensis seems to be on the mainland of China about the same latitude and further south.

A few remarks about each of the three species of worm might be apropos :—

Ascaris Lumbricoides.—All that need be said about this worm is that I feel certain that the 76.5 per cent. does not cover the total infection. Santonin is so easily obtained here now and so freely purchased by the natives that it is reasonable to believe that the actual percentage of persons from time to time infected is very much larger than here given. Age and sex seem to make little difference except that children appear to suffer even more than adults from the invasion of this worm, but here my statistics are not very satisfactory.

It is rather striking to notice that the percentage infections of different employments scarcely vary at all. From this we may presume that infection takes place in the first place by the medium of food.

In these 1,000 cases I have failed to find one where any form of ill-health, except occasional attacks of colic, was dependent on the presence of ascaris, and even the cases of colic from this cause were very rare. Flatulent distension of the bowels in children does, however, seem sometimes to be associated with the presence of a large number of round worms.

Trichocephalus Dispar.—I have nothing of interest to remark about this worm, the eggs of which are very common. The presence of the worm seems productive of no discomfort to its human host.

Ankylostomum Duodenale.—It was in connection with this blood-sucking parasite that I commenced investigation of this series of stools before our committee had decided on this line of research. The figures given in the appended statistical sheets give ground for some serious consideration and raise some problems which are not easily solved. As shown here nearly half of the male population suffers from this form of parasitic infection.

Is the word "suffer" a proper one to use in this connection? To solve this problem I made notes of the diseases for which the infected patients required treatment. I kept these notes for a series of nearly 500 cases and then gave up this line of investigation, as the results I obtained were absolutely nil. Every class of patient suffered from the infection, and no disease seemed to predominate; as a matter of fact, otherwise healthy men coming for treatment for chronic or acute eye complaints showed at least as large a proportion of infected individuals as those admitted for more serious complaints. It follows then, I believe, that we are not to regard every patient harbouring a few of these worms as a sufferer from ankylostomiasis, though one must confess that it is difficult indeed to say where the mere harbourer of the parasite ends and the patient begins. It seems probable that when not liable to constant re-infection a few parasites may be neglected, but on the other hand, all persons liable to constant infection become sooner or later true sufferers from ankylostomiasis.

This leads us to consider the point of how the embryo of the worm reaches its human host. If we turn to the relation of employment to infection and glance at the statistics I give on this point we shall notice how remarkable these figures are. We can divide the patients into two classes. First those employed in agriculture, in which I have included "coolies", as the coolies here are usually men employed on the land, who turn to this form of work to gain a higher wage and finally return again to the land; the percentage of infection here is nearly 70 per cent. The second class is of those of the leisured classes or engaged in business and sundry unclassified employments; the percentage of infection for all these is about 26 per cent.

How are we to account for so striking a difference? Let us look more closely at class I. As will be seen in the statistics given, this class is divided into farmers and coolies; about 50 per cent. infected, and vegetable and flower gardeners 90 per cent. infected. So here again we have a very striking difference. How do these people differ in their mode of living or methods of work? There is no difference as to their mode of living. How then as to their methods of work? I can only myself imagine one point about methods of work which could account for the immensely higher percentage of gardeners infected. This point concerns the manuring of the fields and gardens, and I shall try to work this question out more fully at a later date. For the present we can but note that while manure is applied to the field only at long intervals the gardeners are constantly engaged in watering their gardens with liquid manure. The one set then might be described as being liable to

intermittent, the other to almost constant infection. How does this infection act? It is natural to suppose now that it has been proved that the embryo can pass through the unbroken skin, that the legs frequently exposed to the attacks of the embryoes form the seat of infection. This, however, it would be very difficult to prove, and there is no such disease as "ground itch" recognizable here. The 26 per cent. affected among other employments would in this case represent the proportion normally infected by the mouth.

The worm found in Formosa is the true ankylostomum duodenale. I have so far failed to find the American type.

For treatment I use thymol, and find it quite satisfactory; the only serious objection to the drug being in cases already at death's door from the disease where the danger is that the drug should give the finishing touch.

The embryo does occasionally develop in the rectum and is found free in the stools, though this is denied in some text-books. I have failed altogether in finding the Charcot-Leyden crystals stated in the books to be found in cases of infection with this worm.

II. 50 CASES FEMALE.

The statistics of these cases correspond very closely with those of the 1,000 male cases already given in detail.

Ascaris.—A universal infection at all ages; the percentages being only less even, because of the smallness of the numbers on which they are based.

Trichocephalus.—As in the male cases.

Ankylostomum.—Much less common than in males; the percentage, however, corresponding very closely with that of the non-agricultural classes, and thus bearing out the remarks already made. A severe ankylostomum infection in women is I find very rare.

INTESTINAL HELMINTHIASIS.

Analysis of 1,000 cases (male).

No. of cases.	Total infected.	Ascaris.	Trichocephalus.	Ankylostomum.
1,000.	905	765	491	436

Note:—Of the ascaris cases, 84 showed x eggs only and 255 a mixed infection of x and ordinary eggs.

Table of Percentages.

Total infected.	Ascaris.	Trichocephalus.	Ankylostomum.
90.5	76.5	49.1	43.6

Percentages of Infection according to Age.

	Up to 10 years.	10-20	20-30	30-40	40-50	Over 50 years of age
Ascaris	96.9	75.1	79.4	74.	77.2	74.1
Trichocephalus	31.2	53.1	48.8	44.3	57.1	62.9
Ankylostomum	3.1	38.7	45.1	45.7	44.3	30.7

Percentage of Infections according to Employment.

	Farmers and Coolies.	Gardeners.	Business.	Sundry employment.	No Employment.
Ascaris	76.5	79.2	79.	74.	80.6
Trichocephalus	50.6	51.1	46.9	48.1	46.6
Ankylostomum	49.5	90.	25.7	27.1	24.5

INTESTINAL HELMINTHIASIS.

Analysis of 50 cases (female).

No of cases.	Total infected.	Ascaris.	Trichocephalus.	Ankylostomum.
50	47	42	25	10

Note :—Of the ascaris 3 showed x eggs only and 17 a mixed infection of x and ordinary eggs.

Table of Percentages.

Total infected.	Ascaris.	Trichocephalus.	Ankylostomum.
94	84	50	20

Percentages of Infection according to Age.

	Up to 10 years.	10-20	20-30	30-40	40-50	Over 50 years.
Ascaris	50	83.3	92.3	77.8	100	100
Trichocephalus	50	33.3	61.5	44.4	57.1	50
Ankylostomum	25	.....	15.4	22.2	28.6	50

Note :—In the first and last columns the numbers involved are too small to yield satisfactory results.

Report to Research Committee.

By HUGH H. WEIR, Chemulpo, Korea.

In presenting a preliminary report to the Research Committee I regret to have so few cases to record and also that they are all from this hospital as it means that only a small area has as yet been dealt with here.

My cases comprise a series of 66 in-patients and are unselected, save for the fact that a few who were admitted for treatment for ankylostomiasis had been examined before admission and were not re-examined. But for this the cases are entirely consecutive. The eggs found are shown in the following table:—

Ascaris.	Xegg.	Trichoceph.	Ankylostom.	Tænia Mediocanallata.	Opisthorcis.	Amœba.	Tricomonas.
36 cases.	20	49	20	16	3	1	2

The protozoa were not specially sought for, but are recorded in the cases where they were casually met with in the course of a routine examination. It may also be noted that in no case was it necessary to examine more than one film.

The frequency of the parasites may also be seen in the next table, which shows the frequency of mixed infections.

Single Infections.	Mixed Infections.			
	Two kinds.	Three kinds.	Four kinds.	Five kinds.
11 cases	22	20	4	3

Of these cases only one was admitted on account of his parasites—a case of ankylostomiasis—all others admitted for this disease being examined as out-patients and not being recorded in this series. Of the other 59 cases no less than 44 were under treatment for various surgical

ailments, which had no possible connection with the parasites and though it is conceivable that in the remaining 15 cases there may have been some occult relation between the disease and the worm there were none in which such a connection could be traced.

Beyond the fact of the great frequency of worms in this country and the presence of at least some which are not well known, though not in great quantity, there does not seem to be much of scientific interest to be drawn from this series, but it will be worth while to note the occupations of those affected with the ankylostomum. Of the total number of cases 20, exactly one-third, were affected with this worm. Their occupations are given in the following table:—

Boatman.	Merchant.	Farmer.	Coolie.	No occupation.
2 cases	1	12	4	1

Out of the whole number of cases examined there were 28 farmers, so that it may be seen that there is a distinctly larger proportion of that occupation among those affected with the ankylostomum.

Statistics of Faecal Examination of Stools of 13 Patients from Wenchow Hospital, by Dr. W. E. Plummer.

These statistics have been placed in my hands for publication and contain one or two points of interest to which I should like to call attention. The numbers are too small to reduce to regular percentage tables, but are as follows:—

13 cases showing 6 infections: 1 with ascaris only, 2 with ankylostomum only, 1 with ascaris and ankylostomum, 2 with ascaris and trichocephalus and 1 with trichocephalus and ankylostomum.

The total number infected with ascaris is 4=30.8 per cent
The total number infected with trichocephalus is 3=23.1 ,,
The total number infected with ankylostomum is 4=30.8 ,,

Of the cases 10 are male and 3 are female; the latter showing but one infection of ascaris only.

Nothing can be gathered from the employments of the affected persons except in the case of the ankylostomum infected patients, of whom it is interesting to note that three out of four were farmers.

J. L. M.

Statistics of Faecal Examinations by J. Preston Maxwell, F.R.C.S.

I. 22 Stools from Boys in the Eng-chhun Mission School; and
II. 52 Stools from Patients in the Eng-chhun Hospital.

These statistics have been placed in my hands for publication, and I shall venture on but one or two remarks about them.

I. 22 Stools of School Boys. The almost universal presence of the round worm is very noticeable and bears out the suggestion that in

youth this parasite is particularly prevalent. The trichocephalus infection is strikingly small, but seems to correspond with an almost equally small percentage of infection among the hospital patients.

The freedom from ankylostomum infection is very striking and made still more interesting by the fact that the one boy attacked was the oldest boy in the school (twenty years of age) and had already been engaged in farm labour.

II. 52 Stools of Patients. Round worms are present in a very much smaller proportion than among the school boys. Whip worms correspond with the infection among the boys as pointed out above. The "employment" infection with the ankylostomum does not correspond with my Formosa statistics, but possibly an examination of large numbers might change this. The percentage, however, is in any case very much smaller than in Formosa. The percentage of amœba infection seems very high.

J. L. M.

I. STATISTICS OF 22 STOOLS FROM SCHOOL-BOYS AT ENG-CHHUN.

No. of boys.	Total infected.	Ascaris.	Trichocephalus.	Ankylostomum.
22	22	21	2	1

Note:—Of the ascaris cases 8 showed a mixed infection of x and ordinary eggs.

Table of Percentage.

Total infected.	Ascaris.	Trichocephalus.	Ankylostomum.
100	95.5	9.1	4.5

II. STATISTICS OF STOOLS FROM 52 CASES (MALE) IN ENG-CHHUN HOSPITAL.

No of cases.	Total infected.	Ascaris.	Trichocephalus.	Ankylostomum.
52	37	33	3	9

Note:—Of ascaris cases 1 showed eggs only and 7 cases a mixed infection of ordinary and x eggs.

Table of Percentage.

Total infected.	Ascaris.	Trichocephalus.	Ankylostomum.
71.2	65.4	5.8	17.3

Percentages of Infection according to age.

	Up to 10 years	10-20	20-30	30-40	40-50	over 50 years.
Ascaris	Only one case.	83.3	52.6	85.7	40	Only two cases.
Trichocephalus		16.2	5.3	...	...	
Ankylostomum		33.3	15.8	21.4	10	

Percentage of Infections according to Employment.

	Farmers.	Trade.	Other employment.	No employment.
Ascaris	59	76.9	57.1	66.7
Trichocephalus	3.4	...	14.3	33.3
Ankylostomum	17.2	23.1	14.3	...

Eight cases showed an infection with amœba coli.

Summary and Remarks by Chairman.

In connection with the foregoing papers and statistics a few remarks should be made. One point of considerable importance has been proved, viz., the prevalence of ankylostomiasis in the six widely separated places from which statistics come, that is to say, from four of the provinces of China and from Formosa and Korea. Unfortunately all

six sets of statistics come from coast cities or from places not far removed from the sea line. We require and hope we may be able to publish in the next of this series of reports some accounts from the inland provinces where very little is as yet known on the subject of the prevalence of intestinal parasites. In connection with the ankylostomum infection an almost unanimous deduction is the special prevalence of the disease among agricultural workers. We trust that this point may soon be finally decided by further statistics from other parts confirmed or disproved by corresponding figures of women patients. Such figures are still almost quite lacking and we would appeal to our women physicians to help us in deciding this question. Another point about which we are quite in the dark at present is the relative distribution of the old and new world parasites. We ourselves have seen only the former, which is also found on the mainland opposite Formosa. Dr. Logan has previously reported the presence of the American worm, and it would be of great interest to know what is the relative distribution of these two forms of the parasite.

Mention is made of the tape worm in only one report, that from Dr. H. H. Weir, of Korea. We believe the worm to be absent in South China and Formosa. Why is this and where on its southern route does the parasite stop?

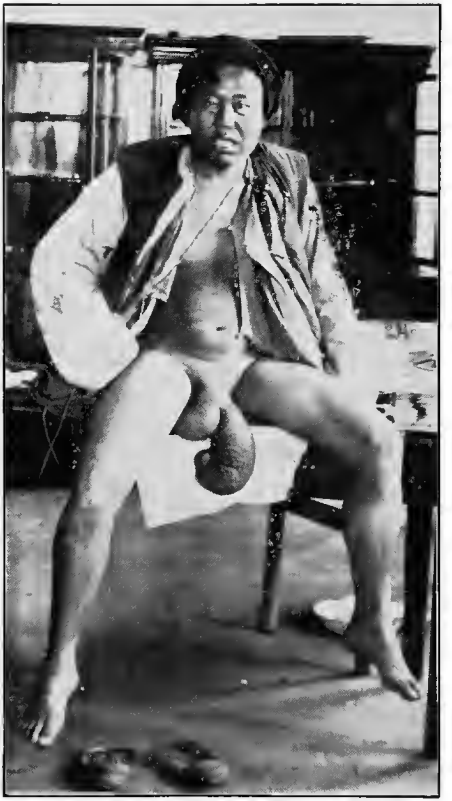
The importance of the opisthorchis sinensis has been emphasised by Dr. Whyte and it seems to be present also in Korea. It is very difficult to believe that this parasite having been discovered in the north and south of China should be absent at all intermediate places. Will our members please keep this question of the prevalence of this worm before their minds?

The same applies to the distomum crassum. We now know that there are endemic centres in the Ningpo and Swatow districts; the worm is of great pathological importance; surely there must be other centres where it can be found. We record our heartiest thanks to the members who have joined in this report and once more beg most earnestly that others will hand us in papers for next year's report. We believe that many members are doing a little work on this subject, and we would beg of them not to suppose that because the number of cases they can examine do not run into many hundreds that therefore their results are not worth sending in. If each member can only examine a dozen cases send them along, and what individuals lack in numbers will then be more than made up in the grand totals.

JAMES L. MAXWELL, *Chairman.*

MALIGNANT TUMOUR OF NOSE.

Foochow woman, aged 38. See Page 225.



ELEPHANTOID GROWTH OF PENIS.

A CASE OF MOLLUSCUM FIBROSUM, ETC.

By M. MACKENIZE, M.B., Foochow.

Molluscum Fibrosum.—I met this man some years ago, a day's journey south from Hinghua. His occupation consisted of selling cakes on the roadside. I induced him to come to hospital, giving a guarantee that the pendulous mass extending from frout of chest wall could be removed. I estimated that this easily movable mass weighed thirty-five pounds. I expected to meet with huge venous sinuses and determined to block these by a series of ligatures along the base of the main tumour. Much to my regret, on the morning fixed for the operatiou, he left the hospital without asking leave; no doubt other patients put him against having an operation.

Cancer of the Nose.—Inoperable. This woman had two sisters who died from the same disease.

Elephantoid Growth on Penis.—Began sixteen years ago; at the close of last year pain started in the posterior surface of the tumour, due probably to the urine forcing a passage in that position. The scrotum was but slightly affected with the disease. After amputation I found the glans and prepuce quite normal. The case is interesting in showing the tumour almost confined to the penis. The amputated portion weighed two pouuds. Filaria were seen in the blood.

THE INFLUENCE OF THE OPIUM HABIT ON MALARIAL INFECTION.*

By J. A. OTTE, M.D., Amoy.

I have chosen to put my subject in the form of the title of this paper, but I might, perhaps, put the question I have in mind to auswer as follows: Does the opium habit act as a deterrant or prophylactic to malarial infection?

First permit me to define the term of my subject. What is comprised under the word the opium habit? In a larger sense it may be defiued as the introduction into the system of opium or its alkaloids by any of the well kuown channels. But I wish to discuss it in a more restricted sense, viz., smoking the drug, though in the discussion we will also have to touch upon its use in other ways. By malarial infection I mean the presence of the malarial parasite in any one of

*Conference paper 1907.

its different forms in the blood, though here, too, I wish to limit myself to cases where there are gross clinical evidences of infection.

In order to answer the question involved we should beyond and above all determine what the action of opium or its alkaloid is upon the parasite. Angelo Celli has taught us that quinine "appears to have a necrotic action on the protoplasm of the parasite" (p. 191). Does opium have this effect or any effect whatever on the parasite? Apparently no work has yet been done to determine the direct effect of the narcotic upon the blood cells or the parasite, so we must limit ourselves to gross clinical investigation, which proves that opium smoking directly affects the number of red blood corpuscles, diminishing them.

A second question requiring an answer is, Is opium, taken either occasionally or habitually, a stimulant, making it possible for the blood cells to more easily conquer the parasite? The temporary stimulating action of the drug, through the nervous system, is well known and cannot be denied. But while it is first a stimulant, it is secondarily a depressant; the order being reversed only in the alkaloid codeine, which is first a depressant, and then an excitant, primarily on the central functions (Ref. Haudbook of the Medical Sciences, Vol. III, page 165). The ultimate action of the drug upon the secretious and metabolism is depressant (White's materia medica, 1896, p. 305). If such be the result of occasional doses, it is certainly no less true of the habitual use. We have all seen the reviving color and other evidences of an improved uetabolism in our patients cured of the opium habit. Hence we must conclude that there is no therapeutic basis for considering the temporary stimulating actiou of opium antagouistic to the invasion of the malarial parasite.

Is opium an autiperiodic? That many of the Indian physicians considered it so is well-known. Chinese practitioners, and laymen as well, have for ages considered it as antiperiodic. Many of those coming to us for the cure of opium habit give as reason for takiug it the desire to cure themselves of ague. Some of our best, the uow somewhat ancient teachers, recommend opium and its alkaloids in the treatmeut of malarial fevers. Among these Bartholow in his Therapeutics and Materia Medica, p. 639, strongly recommends hypodermic morphia for the abortion of a threatened paroxysm; opium diminishes the febrile stage; the addition of morphia to counteract the unpleasant effect of quinine and to increase its therapeutic power. I readily concede much that Bartholow contents for. Indeed for years I combined pulv. doveri with all the quinine I gave iu the treatment

of malarial fevers and recognized the value of its eliminating power through diaphoresis. But even then, in the treatment of malarial fevers, opium and its alkaloids can only be considered as a sedative, analgesic, and antipyretic. It is not really an antiperiodic.

There is, however, one alkaloid of opium, narcotine (anarcotine) whose antiperiodic utility is vouched for by such men as Bartholow, Ringer, Balfour, Rusby and others. But to be of value narcotine must be taken in doses of from two to five grains. This is about equal to from 40-200 grains of opium, as opium contains from one to ten per cent. of narcotine. This is an amount never taken at one time, even by the pipe. Hence we can safely conclude that opium is an antiperiodic of such feeble power that it may be excluded from the list.

Is opium in any sense a prophylactic to malaria? To this there is considerable favorable testimony. The Chinese hold it to be such.

In Gordon's Epitome of the Reports of the Medical Officers to the Chinese Imperial Maritime Customs Service, p. 215, Dr. Shewer, of Kiukiang says: "The use of the drug has the reputation, and usually does act as a prophylactic against malarial fevers. Two opium smokers having been attacked with tertian ague, which passed into the continuous or remittent type, their cases were looked upon as exceptional. In several persons who had given up the habit agues occur with or without diarrhœa."

In the same book, p. 216, Mr. Douthwaite says: "It is noted, however, that he (patient cured of the opium habit) again becomes liable to attacks of malarial fever and catarrhs—the narcotic, and a suggestive fact it is, affording him immunity from these disorders."

Dr. Anderson, of Fatshau, is "inclined to think that opium does act as a deterrant to the development of an attack" of malarial fever.

Dr. Henry Fowler, of Hsiao-kan, Hankow, says: "This is a very malarial district and the opium habit is most prevalent. My observation leads me to believe that the opium habit does *diminish* the likelihood of malarial infection."

Dr. R. Wolfendale, of Hankow, says: "Opium smoking does seem to diminish the likelihood of malarial infection."

Four other physicians, two of whom had only about two years of medical experience in China, are inclined to think that opium smokers are less liable to malarial infection. This, with possibly one doubtful exception, is all the favorable testimony I have been able to gather from the Customs medical reports to 1882 and in answer to seventy-four letters sent out all over the Empire, forty-one of which met with response.

Now for the reverse side of the question. Quoting again from the Epitome of Customs Medical Reports we have the following :—

Dr. Dudgeon says that "among ague patients he has seen not a few who have been opium smokers. He has not been able to trace any antagonistic effect between opium and malaria, so as to enable him to pronounce with authority on the subject."

Dr. W. W. Myers, of Pagoda Anchorage, in a letter of January 27th, 1907, says: "At one time I made a lot of investigations as to the popular belief in its (opium) prophylactic effects against malaria. But I did not get hold of any fact or circumstance that I could fairly bring forward as accurately testifying to the alleged properties."

Dr. John M. Swan, of Canton, says: "I do not think opium diminishes the likelihood to malarial infection." With him twelve others, from whom I received replies, agreed; some stating their opinion very strongly and others in more moderate terms. Permit me to quote more fully from letters sent by three of the fraternity. These will illustrate the opinion of men in three widely separated regions.

Dr. J. Preston Maxwell, of Eng-chhun, says: "I believe that the opium habit has no influence whatever on the incidence of malarial fever."

Dr. W. H. Park, of Soochow, says: "As to statistics I have kept them myself and found that malaria is absolutely non-partial in attacking people living in malarial districts. There is no difference whatever. Opium users are neither less nor more subject to it than other people."

Dr. Sydney R. Hodge, of Hankow, says:—"I find in hospital opium patients are as liable as others to contract malaria, and enquiries confirm this."

My own experience is in accordance with that of the above gentlemen. From March, 1889, to July, 1894, I kept a careful record of the number of opium users among all my male patients. I had, at that time, no intention whatever of determining whether the use of opium would prevent malarial infection or not. At the end of that period I had treated 12,493 *different* males for all the diseases we are called upon to treat. Of these, 1,749, or about 14 per cent., were opium smokers and 10,744 were non-smokers. Of the opium smokers 20 per cent. were treated for malaria, and exactly the same percentage of non-smokers were treated for the same disease. It seems to me that nothing more is necessary to prove that the opium habit has no influence upon malarial infection whatever.

I have failed to find anything bearing on the subject under discussion in any of the available books on tropical diseases. Scheube among the "enfeebling circumstances" predisposing to malarial infection mentions opium smoking.

THE MOSQUITO-PROOFING OF PRIVATE DWELLINGS.

By JAMES L. MAXWELL, M.D., Tainan, Formosa.

I have been asked by Dr. Cousland to write a short paper on this subject. I suppose I have been asked to write this paper because I hold very strong opinions on the question of mosquito-proofing and have in my own case supported these opinions by the expenditure of a considerable sum to render my own house mosquito-proof. That I have been justified in doing this is proved by the fact that I am the only member of our mission who, after a number of years on the field, can claim to have completely escaped a disease which has in past days played havoc with our mission staff.

The ardent mosquito-proofer must be willing to meet good humouredly a good deal of chaff; he will probably be pooh-poohed by his medical confréres and openly laughed at by his lay brethren (and especially sisters). He may remember, however, that in this he will be in the good company of all leaders of reform movements.

For the sake of lucidity I shall confine my remarks to the style of houses required in the tropical district in which I live. The principle can of course be as easily adapted to other forms of dwelling.

For a house then to be properly mosquito-proofed two axioms should be stated.

1. The doors of exit from the house should be as few as practicable.
2. The verandahs should be themselves mosquito-proofed to prevent the necessity of screening a very large number of doors and windows.

It is quite essential that doors and passages to the outside should be doubly screened. By this I mean first a mosquito door, then a short porch and another mosquito door. If only one door is used it is quite impossible to prevent a few mosquitoes entering when people go out and come in. The only exception I should make to this rule would be the servants' entrance to the bath rooms. Here a single door will suffice if, and this is most essential, all carrying of water is done during the morning hours. If hot water for baths has constantly to be carried at night this door too must be doubly guarded. While dealing with the question of doors, a word must be said on the means used to keep these

closed. Undoubtedly the best plan for all mosquito doors is a double door with double spring swing hinges, i.e., spring hinges that swing both ways. At the same time it must be confessed that the hinges at present on the market are, for the most part, eminently unsatisfactory; the spring being very apt to snap after a few months' use, while to be any use at all they are very expensive. I must confess that I am disappointed with the hinges I have used so far, but the system is such a simple one that I am still willing to pay a high price for a hinge that will prove durable. Failing these nothing beats a simple iron coil spring for pulling the door to. The coil should be long, not very powerful and to avoid slamming, fixed in such a position that it is put as little on the stretch as is consistent with closing the door; such coil springs are very cheap.

In our houses verandahs, though pleasant all round a house, are only essential on the south and west sides to keep off the typhoon rains. The verandahs should be thoroughly screened through their whole extent, leaving no windows. The question then comes of how to deal with the windows on the side of the house where there are no verandahs. These windows must be made to open, at least in this region where outside wooden venetians are an essential. The question of these windows gave me much trouble at first, but I have now solved the problem very satisfactorily. My own windows are in sets of three—an inside glass pair of doors, an outside pair of wooden venetian doors, and a moveable mosquito screen between. The moveable mosquito screen is of the simplest. It is divided into two halves—an upper and outer half—which is nailed immovable, and a lower and inner half, which can push up. The lower half, when pushed right up, is held in that position by a spring which flies out on each side and prevents the window falling again. To let down the window one finger of each hand pushes the spring hinge back and the window falls into position. A rough sketch is here given of the springs holding the lower window frame up when raised. The arrows show where the fingers must push to collapse the springs and allow the windows to fall.

This has the great advantage that a window cannot be half closed by a careless servant, and if not left fully open, in which case the negligence is clear to every one, the window must be closed entirely; it cannot be left in any intermediate position. The springs were

bought in our out of the way city here, and so could probably be obtained without difficulty at any important centre.

Three difficulties are constantly raised by ignorant objectors to the use of mosquito screens. These refer to light, heat, and air.

Light.—People sometimes speak of mosquito-proof houses as if their dwellers were consigned to the eternal gloom of the inhabitants beyond the Styx. This conception is wholly incorrect. I remember a gentleman coming into our house and remarking: "Surely these huge glass panes are liable to be broken by typhoons." The "panes" were not of glass but of wire gauze, but the difference in light was so slight that the mistake was easily made. A room is hardly darkened at all by the use of mosquito screens of a suitable material. I constantly take photographs in our mosquito-screened verandah and give no longer exposure than I should give in the shadow outside.

Heat.—This is a point which is easily determined with scientific accuracy. I kept records of one of our verandahs before and after screening and could not determine that the screening raised the mercury one degree of temperature.

Air.—"I could not sleep in a mosquito-proofed house", said one lady to my wife, "I must have air." Needless to say that lady had never spent more than an hour of her life in a mosquito-proofed house and certainly had never slept in one. Yet she slept every night under a heavy mosquito curtain while we for six years have been able to do without these encumbrances. That lady has suffered from many attacks of "fever", despite her mosquito-curtained bed while we have escaped. There is only one objection to these mosquito-screened rooms, and that is a curious one. My wife and I find it so close and uncomfortable to sleep under mosquito-curtains, after so long being free from them, that it seriously interferes with our pleasure in staying away with friends. Mosquito-proof houses are, especially in the evening and night when we need it most, the most airy houses in the East.

Of course it is necessary to be careful in the choice of the wire gauze. We have ourselves used for six years what is called pearl wire cloth bought from Montgomery, Ward & Co. of Chicago; as far as I know this is better than any English wire gauze. I hope, however, during my time on furlough to enquire more particularly into this question. It is possible to get a wire gauze which does decidedly darken the houses, and this of course is to be avoided. It is also very easy to get a cheap gauze, which is destroyed by the weather very rapidly. The wire cloth mentioned above will last, in the most exposed positions possible, for about five or six years, and in less exposed situa-

tions for, I should think, at least ten years or more. The cost of screening a whole house here is from $200 to $300 Mexican, and considering the heavy duties and increased cost of labour and all material here the cost should not be more than about two-thirds of this on the mainland.

Lastly there is no subject where the proverb, "Actions speak louder than words", is more true than about mosquito-proofing. Seven years ago, when I came to Formosa, there was not a single mosquito-proofed room in the whole of the south of the island. Nothing but good humoured jibes met our early efforts at mosquito-proofing. Now there is scarcely a single house, missionary or merchant, where mosquito-proofing in part or whole has not been carried out; the fever incidence has fallen very markedly, and the only house where fever is prevalent is the house which still contains the bitterest opponents of the use of mosquito screens.

While not so directly concerned with this question, though kindred to it, is the question of mosquito-proofing the dormitories of our schools. Only this, I believe, will quite prevent the wicked (there is no other word to use) habit still prevalent in some schools of sleeping more than one child under the same mosquito net, even though one of the children may be suffering from pulmonary tuberculosis and thus making our schools centres for the spread of tuberculosis.

A PLEA FOR THE PREVENTION OF MALARIA IN MISSION SCHOOLS.

(With notes on the systematic giving of quinine to the boys in the Changpoo school.)

By J. HOWARD MONTGOMERY, M.B., Ch.B., Ed., Amoy.

To those who practice the prophylactic treatment of malaria regularly and systematically, in the various schools, for the health of which they are responsible, such a heading as the above may seem out of place and unnecessary, and yet from personal enquiries made of many doctors, I find that such a plea is not only justifiable but necessary, for the majority of those asked about this question frankly admit that malaria occurring in the boys and girls of the various schools is only treated when fever is present, and nothing is done as a rule to prevent subsequent attacks. It may be the good fortune of some to be placed where malaria is not frequently met, but in many places where it is omnipresent, in the rush of routine hospital work, prophylactic measures are forgotten, the health of the scholars suffers, needless work

is added to the already overburdened physician, the reputation of the school deteriorates, and as a result parents are unwilling to send their children to a school where repeated attacks of malaria seem the order of the day.

Especially at this crisis in the educational work of China is this question of extreme importance, for never before have mission schools had such keen competition to contend with as they have to-day from the newly-established government schools which have sprung up so rapidly all over the empire, a competition which bids fair to be a serious menace to the church getting hold of the youth of the nation and training and instructing them in useful sciences and instilling into the young mind the truths of Christianity, which is the ultimate aim and object of all educational enterprise.

If our mission schools could show, as it were, a clean bill of health, could the scholars be able to say that during the term in school they had better health and less fever than in their own home, such a testimony would have weight and parents would be the more willing to send their children to such a school, even should the competing Chinese school be equal in every other respect to such a mission school. With this preliminary justification of this letter, let me briefly state the results of the systematic giving of quinine in the boys' school in this city. The district where this experiment was carried out is in the Fukien province, about midway between Amoy and Swatow, and some ten miles inland as the crow flies. It is a low lying, rice growing district, and malarial and filarial fever, like the poor, are ever with you. The school is not a large one, only numbering fifty, including three Chinese teachers, and almost all the boys reside on the premises. The term I speak of began on the 1st of March and ended on the 5th of July, 1907.

When the boys assembled each was in turn examined and a malarial history taken, liver and spleen were carefully examined and notes made, but unfortunately no blood films were taken, as my microscope had not then been replaced after the riots and the burning of the hospital building by the Chinese last year. For convenience let me divide the history of malaria, as given by the boys, into three groups:—

1. Those who had it frequently, and by that is meant at least twice a week, and not a few were having daily attacks.
2. Those who had it occasionally, i.e., once a week or once a fortnight.
3. Those who had it seldom or never.

Belonging to the first class were forty out of the fifty, or eighty per cent.; in the second were only four, or eight per cent.; and of the third class were six, or twelve per cent. Again let me divide the conditions found in the spleen into three groups:—

1. Those markedly enlarged, i.e., when the spleen could be felt at least extending to the umbilicus.

2. Moderately enlarged, i.e., when the spleen could be felt by palpation to extend well beyond the costal margin.

3. Those with no enlargement.

Belonging to class 1 were 14, or 28 per cent. Class 2 bad 27, or 54 per cent., and in class 3 were the remaining 9, or 18 per cent. The ages of the boys varied from 8 to 19 years, the average working out at 14 years. The giving of quinine was not left in the hands of either teachers or boys, but the doctor on paying his visit to the school had the roll called and each boy in turn came up to the front and received his portion, which was swallowed before he was allowed to return to his seat, so that there could be no deception or selling the quinine afterwards, as has been practised in some schools. Sulphate of quinine was used, made up into pills with a simple excipient, and tbis was found both simple and cheap. The plan of administration was as follows: During the first week each boy got a pill containing 3 grs. every day, during the second and third weeks each boy had a 2 gr. pill four times a week, the fourth and fifth weeks it was reduced to 2 grs. three times a week, and from then till the end of the term 2 grs. twice a week. This plan worked well, and although I do not advocate it against all methods, I think for simplicity and efficacy it will be difficult to beat, and gave with me infinitely better results than giving larger doses at longer intervals, which method I had previously tried.

In this particular instance the results were most encouraging, almost beyond belief, for during the whole term of 18 weeks there were only 23 cases of fever occurring, and one boy alone was responsible for five of these. Of these 23 cases 9 occurred among the boys with markedly enlarged spleens, 7 occurred among those whose spleens were moderately enlarged, and 7 occurred in those whose spleens were normal. It is also interesting to note that no case occurred in those who said they never had fever, showing that the histories the boys gave were of some value. According to the malarial history obtained, at the very lowest estimate the number of cases of fever should have been 1,512 during the term, and to bave reduced that number to 23 was sufficient reward for any time and energy expended in attempting the experiment. To the quinine in great measure was tbis result due, but other factors helped to bring about this desirable end.

The 14 boys with markedly enlarged spleens were under special treatment for that and were given increasing doses of iron, arsenic, and santonin, and were painted locally with liq. iodii fort. and in some cases had a sun bath for half an hour after the application; whether the

OSTEO-SARCOMA OF INFERIOR MAXILLA.

sun bath had any direct influence in reducing the size of the spleen or not, it is difficult to say, but in these cases the reduction was more marked, hut it may have heen that these cases responded more to treatment than the others. In every case at the end of the term there was an appreciable diminution in the size of the spleen, and that in itself is a most desirahle thing. Again it must be admitted that when fever occurred in any boy his quinine was increased for a week, and perhaps he was also given some other anti-periodic.

Another thing that must not he omitted, was the regular exercise each hoy had to take. Physical drill was regularly performed hy all the hoys, except in special cases, when it was forbidden by the doctor, and care was taken that the bedrooms of the boys were not overcrowded, and these things, combined witb regular hours for meals, and going to hed early, all helped in thus reducing the incidence of malaria. The cost of such an experiment is very trifling; a little over ten ounces of quinine were used, and cost at that time about $5.50, so that no one could object to it on the ground of expense.

It is hoped that this letter may stimulate some, who as yet have made no attempt to reduce the incidence of malaria, to give this method a trial and see if the method of getting the system under the influence of quinine and keeping it so, may not have the same happy result with them as has been the case here. In conclusion I would like to record my thanks to my colleague, the Rev. H. W. Oldham, for his invaluahle help in making the experiment a success.

OSTEO-SARCOMA OF INFERIOR MAXILLA.

By HARRY B. TAYLOR, M.D., Anking.

The history is as follows:—

Shop-keeper, aged 33, from Tai-hu, Anhwei. Tumor began twelve years ago as a small lump on external surface of right half of lower jaw. Growth slow until last year or two, during which time enlargement has been rapid.

Tumor involves right half of inferior maxilla to within ½" of tempero-maxillary articulation. Left half of bone shows involvement to angle of jaw. The lower incisor teeth project from upper surface of tumor which within the mouth is lobulated, forcing tongue back to fauces. On the inferior surface of tumor are several ulcerated areas, exposing the bony structure of the growth.

On being told of the serious nature of the operation for his relief, the patient went home to arrange his affairs, promising to return later for operation.

If he does, which I think he will, you shall have the specimen for the museum, if you want it. ["We do!" ED.]

POST-GRADUATE GLEANINGS.

By GEO. F. STOOKE, L.R.C.P., Ichang.

That was a wise saying of an African missionary on his return to his station that he would never again go home for his furlough until he was supplied with a medical certificate saying he was strong enough for the ordeal. It is the common experience of most missionaries that their societies terribly overwork them at home and that deputation work there often proves a far greater strain than full mission work in a foreign land, and in my own limited medical experience in China I have observed that there is a very high mortality amongst missionaries just returned from their furlough. They often come back physically and nervously unfit, and instead of being the stronger for the change, instead of returning with new plans and a freshly fired enthusiasm, they may often be truly classified as "returned empties".

I was, however, more fortunate than many, for the organising secretary of our foreign mission was an old Indian missionary himself and saw to it that the men at home did not have too much to do. I was able also to put in some four mouths at medical studies and I propose to pass on to my brother medicals in China a few things I learned, some of which I have already tested and all of which I expect in the future will prove of value to me in hospital work.

To some men what I may have to tell will doubtless he a very old story, but I feel sure there are some members of the Association who will be as glad of the few hints I now give as I was to hear them from the lips of the teachers best qualified to speak, in Edinburgh and London. With a further apology for the necessarily rambling nature of the jottings let me plunge at once in medias res.

MANSON ON MALARIA.

Many will envy me the privilege of sitting at the feet of so illustrious an authority as Manson. Here are a few scraps from his lectures and clinics on malaria.

"The principal drama of malaria is played in the internal organs. Finger blood may only have one parasite in the field, while every red cell in the brain may contain a parasite."

"Not only is there destruction of red cells, but those left have their hæmoglobin value lessened. All the white corpuscles are diminished and the polymorphonuclears are much decreased—the opposite of septic trouble where they are increased. The large mononuclears are relatively increased even up to 20 per cent., and this is very important, for it means *protozoal* infection. Thus it also occurs in trypanosomiasis and the infection by the Leishmann-Donovan bodies."

"In Africa crescents are very hard to find, but the same patients show them well in England."

[Here may I be allowed to interject a personal note. During the past three weeks my colleague, Dr. Graham, and myself have examined the blood of every case of possible malaria which has visited the hospital. Every day we have found one or two cases showing crescents. This is a very different state of things from two years ago when a crescent blood was considered a rare specimen, and probably accounts for the high malarial mortality in this district last year and the epidemic of severe cases we are having now. All our æstivo-autumnal cases have yielded more or less rapidly to small doses of quinine by the mouth.]

"The symptoms in the pernicious cases come on very suddenly and life is in danger. The hyperpyrexia type is usually diagnosed sunstroke or heat-apoplexy. This is especially common in Hongkong, and, post mortem, the cerebral vessels will be found full of organisms. In other forms the patient may suddenly become comatose; it is generally diagnosed "alcoholism". There is a choleraic type accompanied with purging and vomiting, and this may even be epidemic in nature, and in tropical districts one should always be suspicious of malaria. Then there is a dysenteric type, but the temperature is high. Malignant malaria is a very common cause of infantile mortality in malarious districts; the diagnosis is usually "convulsion" A comatose case in a child may be saved by energetic quinine treatment. A specimen from the brain may always be obtained without the necessity for a post mortem by perforating the orbital plate of the skull through the conjunctiva with a strong hypodermic needle."

"Quotidian periodicity is a trap for false diagnosis. Quotidian periodicity is *not* characteristic of malaria, but tertian and quartan are. Quotidian periodicity is common to tuberculosis and sepsis, liver abscess, syphilis and calculi."

"Quinine must be applied *to the blood* to be of use as a diagnostic. If given in solution the stomach and bowels must be in order. It is often preferable to give it hypodermically and by that is meant an intra-muscular not a subcutaneous injection.

MANSON ON THE TREATMENT OF SPRUE.

"In all cases of intestinal flux always personally inspect the stools, and if the case is at all chronic a digital examination of the bowel *must* be made and always a microscopic examination of the blood.

We have arrived at the treatment of sprue empirically. Milk is the only drug given and the only food allowed; it combines the maximum of nutrition with the minimum of work for the bowel. Don't try and fatten your patient; just keep body and soul together. Keep him in bed. Allow 2 or 3 pints of milk in the 24 hours, dividing it into small doses every two hours. Let him take it as nature

gives it—*guttatim!* When the patient is improving don't increase his diet; starve him with milk till he fights you for food! Then go up gradually to eight pints per diem. After his stools have been normal for six weeks, then begin to add an egg and finally minced meat. Fruit is very useful; apples, bananas, and strawberries especially."

OTHER FEVERS.

I could obtain practically no advice or information regarding the simple continued fevers knowu by the local designations of every treaty port in China. Who will be the first man to give us real light on these puzzles? But we may all make sure by a blood examination that we do not include a case of relapsing fever amongst them. For an authority at the Londou Tropical School told us: "In relapsing fever there may be no relapse at all; only the first fever."

BLOOD WORK.

I wonder are there any members of the Association who do not make satisfactory blood examinations? If so may I introduce them to the wonderfully effective Leishmann's modificatiou of the Romanowsky stain?

Burroughs and Wellcome supply soloids of this stain, and all that is needed in addition is some pure methyl alcohol to dissolve the soloid and distilled water (filtered rain water does splendidly) for diluting the dye during the process of staining. It is very easy to work, so easy that our Chinese assistant, after watching us a few times, made a perfect slide himself, and uow all we require to do is to look at the specimens he places for our inspection and diagnosis. With this stain blood work is a real delight; each film is a perfectly beautiful picture, and one's certainty iu diagnosis is considerably enhanced.

One other really good thing in blood work I learnt from Dr. Gulland, the blood expert in Edinburgh, a simple metbod which every surgeon should regularly employ in his wards. It is known as the "GLYCOGEN REACTION." The reagent is made up of iodine, 1 gram; pot. iod., 3 grams; distilled water, 100 cc; gum arabic, 50 grams, and a drop of this is placed on the dried film of blood to be tested. The red corpuscles are thereby staiued yellow and the white corpuscles are pale, but if there be any septic infection within the body these white cells will show granules of glycogen stained brown with the reagent. This is a most delicate test of sepsis and is present even when leucocytosis is absent. By its means one may readily diagnose between septic and a malarial rigor. It is a grand test iu appendicitis. The granules may be seen diffused throughout the protoplasm of the

polymorphs in mild cases, as minute dots in cases further advanced, but if large and protruding grains of glycogen are seen the case is a severe one and the surgeon should operate at once. Gulland thus tabulates the significance of "*leucocytosis*" :—

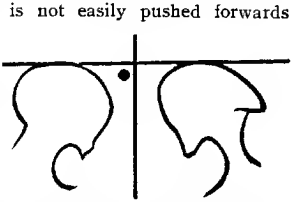
Present (up to 13,000).		*Absent.*
(Physiological.)	(Pathological.)	
Pregnancy.	Cinchonism.	Pure influenza.
After parturition.	Post-hæmorrhagic.	Measles, Rötheln, and mumps.
New born children.	Malignant disease.	In uncomplicated tuberc. but it is present in tubercular meningitis.
After a rich proteid meal.	Yellow atrophy of liver.	Typhoid fever. Shows a diminution even down to 4,000, seen even before the Widal reactiou.
Exercise.	Gout.	Paratyphoids.
Cold bath.	Inflammatory and other organismal infections; the pneumococcus causes the greatest increase, the coli communis the least.	Malta fever.
Just before death.		Malaria.
		Cystitis, but is present in pyelitis.

"If the leucocytosis is slight in a severe infection the prognosis is very bad."

"Poikilocytosis is really no guide in *pernicious anæmia*, as it occurs also in cases of chlorosis. What is important is the very large sized red cells seen, often showing nuclei or basophilar degeneration. During a relapse the characteristics are—plump red cells with many megalocytes, a little poikilocytosis and some nucleated ones."

TO TAP THE CEREBRO-SPINAL FLUID.

The best place to make the puncture is between the 4th and 5th lumbar vertehræ, where the space is large and the dura mater firmly attached to the bones, and so is not easily pushed forwards by the needle. The best place to insert the needle is shown in the diagram. A line across the upper level of the iliac crests crosses through the spine of the 4th lumbar vertebra. Go half an inch below that line and a little to the left of the middle line.



The patient's posture. If well enough he sits in a chair with the knees apart and stoops till his hands rest upon the ground and the needle is passed in a direction slightly upwards.

If in bed he lies in the left lateral posture with head bent upon the chest and knees flexed upon the abdomen and his hands under his thighs, and the needle is passed horizontally forwards.

The fluid. Half a test tube full may be safely drawn off, but if more than that is taken, headache and sickness may follow. The fluid

is normally clear like water, but in pneumococcal meningitis it is turbid, in jaundice yellow, and in the meningitis of middle ear disease it may contain pus.

SURGICAL TECHNIQUE.

The patient's skin. The night before operation scrub all the area that the dressings may touch with green soap and hot water. Shave all the parts. Put on a soak of soda all night to soften the epithelium and an hour before operation scrub the skin thoroughly again and apply a 1-2000 perchloride dressing.

The surgeon's hands. The surgeon should always use rubber gloves for septic cases. He should wash his hands in water sufficiently hot to cause them to perspire and use soap till they are like a washerwoman's. Then scrub with a nail brush for fully ten minutes. Then five minutes in methylated spirit and a final last wash with 1-2000 perchloride.

Instruments. Do not boil them in a soda solution, but in a weak lysol one, and they may soak in it all night without fear of rusting. Knives may be boiled if soft leaden sheaths are made for the blades and their cutting capacity will not be impaired.

Catgut. Dry iodine catgut is very useful and is probably the best and does not irritate the tissues unduly. It is easily made. A roll of catgut eighteen inches long is rolled up and bound and soaked for eight days in an iodine solution composed of iodine 1, KI. 1, distilled water 100. Then pour off the iodine solution and place the catgut with sterilized forceps into a sterilized vessel containing calcium chloride and it will be dry in twelve hours and ready for use.

Bier's treatment by congestion in joint affections was highly thought of in Edinburgh. In cases of tubercular joints it is only necessary to bandage above the joint till distinct venous discoloration of the limb below is produced, and this need only be employed for two hours daily. This treatment also markedly eases the pain in gonorrhœal joints.

The fresh air treatment in cases of surgical tuberculosis was also advised. Such patients were kept out on the hospital balcony all through a Scotch winter and even in a London fog improvement was marked.

I trust these very scrappy jottings, selected at random from my notes, may prove of value to some, and I shall be always glad to hear if any word in this article has helped a man in any difficulty or enabled him to perfect himself in diagnostic methods.

C. C. M. M. A. PRESIDENT'S ADDRESS, 1908.

LADIES AND GENTLEMEN:—It is my first pleasure and duty to thank you for the honor you have done in electing me to the position of President of the Central China Medical Association, and I do so with a strong feeling of unworthiness as I think of those who have preceded me in this office and who, in and through our Association, have done so much for the advancement of the cause we represent. More especially is this feeling borne upon me as I consider the life and service of him who immediately preceded me, our late honored president, Dr. Sydney R. Hodge. It is just one year ago that he delivered his last presidential address, in which it seemed to me he struck the keynote of a larger and wider medical missionary opportunity and duty in his introduction and advocacy of "research" work.

In doing this he placed, as it were, a capstone to the monument of his long years of magnificent service. Little did we then think that it would be left to us to go forward in the work without his valued counsel and assistance, and I am sure that you are one with me in the feeling, that as time goes on and the acute pain we felt as his departure becomes less oppressive, that the sense of loss in our Association becomes greater.

Dr. Hodge was, I believe, the first to propose the organization of this Association, and our debt to his memory is great, and it seems to me very fitting that this should be shown in some tangible form.

He was the pioneer in many phases of our work which we now accept as a matter of course, often not knowing the struggles at their beginnings.

Amongst these and one of the latest of general acceptance is that of the training of competent nurses. During the past year we laid down plans for a thorough course of training with examinations by appointees of the Association which will present diplomas and medals to the successful candidates. In addition to the diploma and medal to be granted to the successful candidates, I wish to propose that above and beyond this we create a "Hodge" medal to be given to the one standing highest in character and attainments at each graduation examination. If the Association approves, I shall ask the privilege of donating such a medal.

In addition to the honor you have done me in electing me president of the Association, the committee in charge very kindly selected the

subject on which I should address you to-day. The subject chosen, "Hospital Economics" is, I fear, quite too large a one to more than touch upon in the short time at our disposal. The economics of hospital "construction", "appliances", "antiseptics", "sterilization", "attendants", "assistants", "charges", "purchasing", etc., could each take a session and be discussed with profit.

I have taken the liberty of confining my remarks to the last mentioned—the economics of purchasing supplies—because it is a question that is always with us, the one above all that can be least criticised and the one which gives the largest return with the least amount of time expended.

In all the various phases of "economics" above enumerated, with the exception of the one we shall make the subject of our discussion, we are up against the elements of "economy" versus "efficiency". To a certain extent this is true regarding the last also, but I would eliminate the question of "quality" by saying that the comparison of prices I shall give you, represents differences in the cost of goods of the same quality.

The first principle of business is to buy in the cheapest market and sell in the dearest. Our vocation in life is not commerce, but we ought to observe the principles of business in the disposal of the funds given to, or earned by, us for our work, and the first half of this principle is for all of us.

The original sources of supply are naturally the lowest priced, but this usually applies to the purchase of large quantities, and in these days of trusts and combines we are as consumers, usually denied the right to buy from such original sources. An apparent exception to this rule is found in the case of rectified spirits. The price at the refinery in Hongkong in barrel lots, compared with the price in Shanghai in 5-gallon lots, shows a difference in favor of the latter of 45 per cent., but we must bear in mind that the source of supply is before Shanghai and is not probably Hongkong. Then again, it may happen that the producers of one country may be able to undersell those of another on account of being at the original source of supply of some commodity that goes to make up the finished product, or there may be greater liberality in excise regulations, as for example in alcoholic preparations.

In estimating the exact cost of goods we must take into account the cost of packages and packing. Two British firms I have in mind show a difference of over 150 per cent. in these items.

The factor of freight is a very important one and the final cost to small buyers is much larger than to the purchasers of large quantities

unless some combined buying plan, such as our purchase committee works on, is followed. The difference between buying in small and in large quantities is sometimes over 100 per cent. I shall presently draw your attention to some such items. We may lose as much as 50 per cent. by confining our buying to a single firm. Again manufacturers sometimes sell their products at lower prices in foreign countries than at home.

The last factor I shall note is the personal contact of buyer and seller. I remember once, in America, buying conditionally, some goods from the representative of a British firm. Shortly after I went to England and bought exactly the same goods from the same firm at a difference in price that paid all the expenses of my trip. In about the only instance where our committee came in direct contact with the seller, we secured one-half penny per ounce reduction on quinine from the lowest cable quotations, saving in this one purchase, over and above the general saving, the sum of $40.00. Our net saving on last year's purchase of quinine was $460.00.

In the verbal reports which the purchase committee has presented it has been intimated that a saving of from 45 per cent. in the case of one hospital down to 15 per cent. in the case of the best buyer has been effected. Careful examination confirms this favorable estimate.

Up to the time of the formation of the committee, all of our members were in the habit of placing practically all of their annual or semi-annual orders with one firm, and the firms favored were either British or Shanghai.

The committee first received estimates of the probable wants from each hospital. These estimates were tabulated and prices asked on approximate amounts from a number of reliable firms.

The estimates were classed, so that the orders could be divided if found advisable, and we finally bought from eight different firms. I am unable to give the exact saving of each buyer, as I did not know the former prices paid, but for comparison I have taken an average order of this year and dissected it with the following result. The comparison is between the ones purchased from and the next best :—

Chloroform	the same.
Alcohol	saved 25 per cent.
Extracts	,, 35 ,,
Spirits	,, 10 ,,
Tinctures	,, 15 ,,

If opium had been taken from this list the gain would have been 20 per cent. It is a fact worth noting that every tincture was cheaper, with the exception of opium, which was 50 per cent. dearer.

The net cost of the above items was £8.0.5, and if bought from the next lowest firm would have cost £10.18.4, a saving of £2.17.8, which equals 25 per cent. Above this we get an additional 5 per cent., but as the other firm offers a discount of 15 per cent. it shows a net saving of 15 per cent.

On the purchase of goods under the heading "general drugs and instruments" the purchaser lost 4 per cent., hut this is accounted for hy the fact that most of the order was not carried by the competing firm, and the comparison therefore is of only a very small part of the order, and the total loss amounted to only $1.00.

I shall now note some of the variations in prices quoted the committee.

Absorbent Cotton	37½	per cent.
Absorbent Lint	100	,,
Absorbent Gauze	500	,,
These three combined, 218 per cent.		
Iodine	25	,,
Iodoform	28	,,
Pot. Iod.	46	,,
These three combined, 33 per cent.		
Quinine	160	,,
Sunlight Soap	100	,,
Condensed Milk	35	,,
Petrolatum	318	,,

Our combined purchases for the year amounted to not less than $10,000, and taking 15 per cent. as a hasis of saving, and this represents the saviug of the one hospital that formerly bought at lower rates than any other ; it gives a net saving of $1,500 for the year—no small sum to use for the betterment of the work of twelve hospitals in one year.

A word as to how we save in detail. Alcoholic preparations are bought in Europe and under an extra discount for quantity. Iodine preparations are bought in Japan, and the saving effected is altogether in the freight and packiug. Quiuine is bought in 100-ounce tins and upwards of 2,000 ozs. at a time. Condensed Milk comes direct from the manufacturers in lots of not less than 50 cases, with an extra discount because of the philanthrophic character of our work. Sunlight Soap comes direct from the factory, in lots of not less than one ton. General drugs and instruments are bought under a guarantee of a stated value, for which an extra discount is allowed.

In some items of supplies our committee has not been in a position to recommend any line of action. I trust our discussion will bring light to bear upon these as well as other matters. Bandage cloth is one of these. I think we are all agreed that the foreign cloth is better, aud a quality

sufficiently good to stand washing, is most economical. Petrolatum costs less than half the price of lard, and when it can be used, is cleaner and better. I find that by buying coal in July a saving of 50 per cent. is effected, but unless stored in a dark store house loses its heating value at the rate of about 2 per cent. per month. There is a standing offer in my hospital of $1.00 for every practical suggestion that will make for efficiency or economy, but I sometimes think that it might as well be $10,000.

Once only have I had an opportunity to give it, and that was in connection with the purchase of rice. The suggestion was that we have a standard measure made, and on investigation I found that we were getting short measure to the amount of over 20 per cent. What is the best method of buying rice? Some I find make a contract for the year's supply at a stated rate to be delivered as required, others buy a year's supply and have an approved system of storing it, some place the whole food supply in the hands of the cook at so much per head while others buy all things as required. I am doubtful if any three of us would find any one plan most satisfactory. Time, environment, and opportunity are all factors to be taken into account. My own plan is to give the cook a stated amount per head for vegetables, fish, etc., as these items are more stable in price, and buy the rice as required, purchasing ahead on a rising market—sometimes finding it a falling one before the stock is finished.

Have we reached the limit of our saving possibilities in the purchase of general supplies, or can we hold all we have gained in the future, are pertinent questions. To the last I would say yes *if* we hold together and have a few more join us in order to have a margin of safety when the size of the order is a necessary factor. Should we return to the old way I do not think that our largest buyer will save as much by 10 per cent. and the smaller ones by 20 per cent.

To the first question I would say, No. A careful study of freight and packing charges may open out a further saving of 2 per cent. or 3 per cent., and sooner or later cheaper sources of supply may be found, but this last will require constant watching. It is useless to consider the question of a central supply depôt unless some philantrophist will establish one and look for neither profit or interest on the capital. I am informed that steps are being taken for the establishment of such a supply depôt as a missionary enterprise. I have been unable to get definite information about this, but should it be done our bills for supplies will be very materially reduced.

There are, however, two other ways in which I see a possible reduction of from 5 per cent. to 15 per cent. from our present prices. There

are now being formed through China and Korea more branches of the C. M. M. A. such as ours, and if this matter was introduced to these branches they could effect a saving of at least as much as we have, and if all of them came in we could get a material reduction in prices for the quantity we would then be able to buy.

Granted that with more hospitals buying together we could double our present orders, I venture to say that if we were to give one of our members, when on furlough, a year's orders in his hand with power to make a three or five years' contract we could save at least an extra 15 per cent.

JOHN MACWILLIE, M.D., C.M.

In Consultation.

LETTERS FROM DR. WARD.

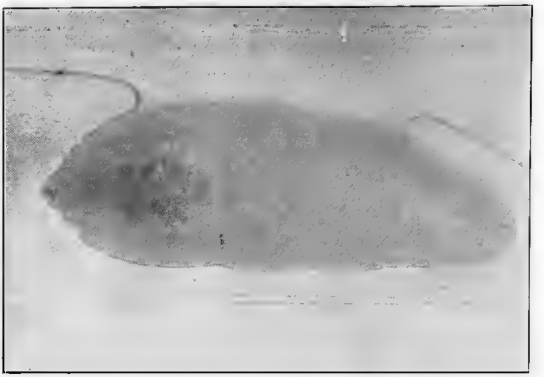
THE UNIVERSITY OF NEBRASKA,
LINCOLN, April 24th, 1908.

DEAR DOCTOR JEFFERYS:

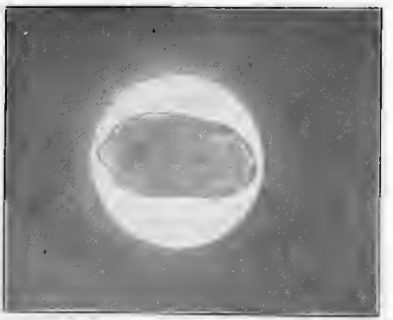
I had to secure a copy of the original article on *D. Rathouisi* which was not available to me. Then it seemed necessary to cut sections of one specimen, even though the material was very precious. I cannot say yet positively, but have come to this conclusion: The specimen is either another form as yet undescribed or the original description of Rathouisi is very much in error.

A paper of mine, now in press, of which you will receive shortly a copy, will explain some of the points you suggest with reference to a large breed of worms and a small. The truth of the matter is that in nature we do not find such conditions, since what Weismann calls Panmixia reduces all to an average condition and the extreme variations in size have proved, everywhere, that careful study has been made both among worms and vertebrates in wild condition, to indicate different species. Your large breeding of horses, and small, depends upon artificial selection and breed under the control of man. I expect that the giant and dwarf ascarids indicate either youth and old age or different species of worms, since some of the largest I have ever seen were taken from children.

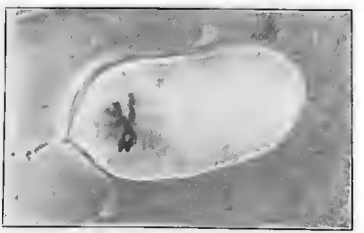
Let me say a word with reference to your paper "Kodaking for Small Game" in the C. M. J. which has just arrived. The articles you figure at the bottom of page 100 are undoubtedly spores of rust.



1. FASCIOLOPSIS BUSKI. Dr. F. W. Goddard, Shaoshing.
Photo by J. L. Maxwell, M.D., Taihan, Formosa. ×1½.



2. DISTOMUM RATHOUISI. Dr. F. W. Goddard.
Photo by W. H. Jefferys, M.D., Shanghai. ×1½.



3. Same. ×2.

Number two certainly belongs to the genus *Puccinia*, which is a common rust of wheat and other grains. It is cosmopolitan and grows on straw and chaff as well as on the grains, so that the possibility of contamination after the discharge of the feces is evident as well as the presence of the spores in normal food material and subsequent diagnosis from feces. These spores have such a thick covering that they are not effected by digestive processes unless it be that they have started to germinate as is often the case. I know of their discovery in feces very frequently. Numbers 1 and 4 together, possibly with 3, are spores of *Macrosporium*. The genus is ubiquitous and cosmopolitan and can be found anywhere in great abundance. It grows on any decaying organic matter. A dead leaf, or any other vegetable, affords a splendid medium for its growth. The possibilities of its reaching the alimentary canal are identical with those suggested for the other species. I have sketched out, though never yet published, a paper on pseudo-parasites that might be useful to men working under conditions where they have not had an extended course in micro-technique and the identification of all possible micro-objects as well as those who do not have available a large supply of material. What would you think of such a paper provided it were generously supplied with illustrations?

In the same number, page 107, I notice two identifications of *Fasciola hepatica* from the eggs. I fear that they are rather doubtful. In fact, I know of no positive identification showing that this species occurs in your part of the world. No doubt you have thought of the matter before and perhaps have some evidence, but in the absence of evidence I should interpret the identification as conforming to *Fasciolopsis Buski*. If you have Mense, Handbuch der Tropenkrankheiten, Bd. I and Tafel IX, figures 3 and 4 give ova of the two species splendidly represented. They are exceedingly similar as you will see, and I feel that probably a renewed examination will determine whether the previous diagnosis of Dr. Day is correct.

Very cordially yours,

HENRY B. WARD.

LINCOLN, Nebraska, April 27th, 1908.

MY DEAR DOCTOR JEFFERYS:

I have looked up the specimens and find them immensely interesting. First let me congratulate you upon the way in which the package was put up. It came through in perfect condition and was a model. The flukes do belong to the so-called old species, *Opisthorchis sinensis*. Perhaps you know that this has recently been investigated by Looss and rather strikingly revised. There are undoubtedly two species which were correctly differentiated originally by Baelz, in 1883, of whom Looss says:—

Baelz recognizes two distinct species of liver-flukes, a *Distoma hepatis endemicum* sive *perniciosum*, and a *Distoma hepatis innocuum*. They are distinguished from one another (see Leuckart, 1876, p. 338), first and foremost by their quite different size, *Dist. innocuum* attaining a length up to 20 mm., whereas *Dist. endemicum* does not exceed 8 to 11 mm. Of the other differential characters given by Baelz the following seem to me to be worth mentioning: *Dist. innocuum* has (1) a uterus of lighter color but larger volume, (2) slightly larger ova than *Dist. endemicum*, and (3) possesses in its excretory apparatus and body-parenchyma numerous black granules. The exact measurements of the ova are, according to Baelz, in *Dist. innocuum* 0.021 to 0.036 mm. length by 0.018 to 0.02 mm. breadth, in *Dist. endemicum* 0.02 to 0.03 mm. length by 0.015 to 0.017 mm. breadth. From the names given to the species it may be inferred that the small variety is very common in the country ("endemic") and harmful to its host ("pernicious"), presumably because of its occurrence in large numbers, whilst the larger is rarer, i.e., not present in large numbers and therefore comparatively harmless ("innocuous").

The specimens you sent are undoubtedly *Clonorchis sinensis*, of which Looss says (page 150):—

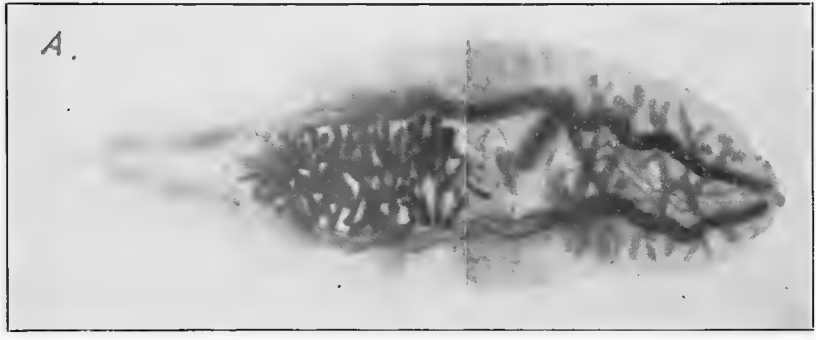
Clonorchis sinensis is chiefly a parasite of Chinese, but occurs rarely also in Japan, i.e., according to what we know at present. For it is not at all improbable that the worm will be oftener found as soon as attention is paid to its existence; it appears also not unlikely that it may be restricted to certain localities; up to now it does not seem to have been found in animals.

You will notice that it is very important to determine the distribution, frequency, and effects of the two species. A number of recent medical reports from the east are radically at variance with reference to the pathological significance of the old *Opisthorchis sinensis*. Very likely this may be due to the confusion between the two species, which may differ in pathological significance. If you have not the paper of Looss available, and would find it of interest, I should be glad to mail it to you for examination at any time.

I have been working myself quite a little on the so-called lung distomes heretofore grouped together under the name *Paragonimus Westermanii*. The species from the tiger originally described under this name I feel confident is different from the species found in man as well as from the species which occurs in this country and which I have named *Paragenimus Kellicotti*. I have a suspicion also that the species found in man in the Philippine Islands is not the same as that which occurs in Japan, Formosa, etc., for I cannot reconcile otherwise the radically discrepant findings of careful observers. To settle this question I am anxious to secure material in some quantity from different regions of the Orient.

Very sincerely yours,

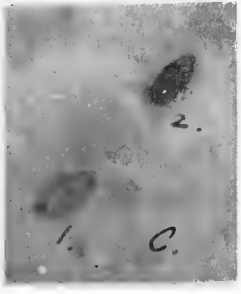
HENRY B. WARD.



CLONORCHIS SINENSIS. Distoma hepatis endemicum. From a dog's gall bladder, Shanghai. Uncleared. X 10.

[See B on reverse of leaf.]

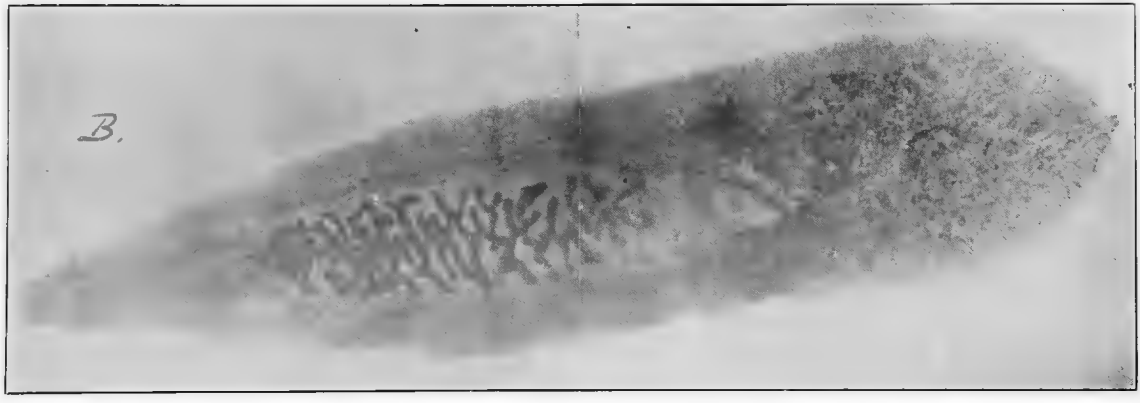
PHOTOGRAPHS BY W. H. JEFFERYS, M.D.



Variation in Eggs of *Clonorchis sinensis* noted on P. 189 of May JOURNAL.

1. Ordinary, operculated type, finely granular.

2. Variation—Slender, no projection of operculum. Large granules.



CLONORCHIS SINENSIS. Distoma hepatis innocuum. From Chinese man's gall bladder, Shanghai. Uncleared. Shows characteristic dark pigmentation. X 10.

LINCOLN, Neb., May 5th, 1908.

DEAR DOCTOR JEFFERYS:

In reading that you recovered about 500 flukes from one case of *Opisthorchis sinensis*, I am overcome with miserly greed.

With regard to the two flukes formerly sent, there is no possible question that *they are not the same species.* Whatever conclusion may be reached, please tack that upon the wall as absolute. I long for more material, for I hesitate to make a final decision on the basis of such scanty supply for comparison. The real alternatives are those advanced in my former letter, namely: that the long one is *Fasciolopsis Buskii* and that the small one is either *F. Rathouisi* or a new species. A dozen or twenty specimens would enable me to decide the case. With these two specimens I still keep hanging on the top of the fence and wondering which way I had better jump, for it is a little too dark to see the condition of the ground. This illustrates beautifully the difficulties of previous observers with reference to *O. sinensis.* While the theory of extension and retraction may appear to you to be tenable it certainly cannot be held in view of what we have found in other cases.

With reference to the method of introduction one can only hazard a guess. All of the flukes have an intermediate stage in some snail. From this they may be introduced directly if the snail-eating habit is common in the region. More likely the animal deserts the snail and in a free swimming stage comes out in moist places to encyst on some plants which are eaten raw—lettuce, etc.—or to swim around in the drinking water and thus reach the human system, or finally to enter a fish for a temporary stay and with fish food to reach the human system.

I wonder if in your reference to "hiusect" you had in mind the note on page 101, C. M. J. If so, I have already written you my explanation of the structure in advance of your inquiry. Your suggestion in the letter that it may have been introduced by rectal treatment is very timely. Certain powders which are used for dusting wounds are very heavily contaminated with rust spores, and in fact one can hardly find any dust which does not contain them. Unless great pains were taken to sterilize all apparatus and material used in rectal treatment they might easily be introduced.

If this does not answer all your questions, come back at me again.

Very cordially yours,

HENRY B. WARD.

Reports of Customs Surgeons.

I-CH'ANG IMPERIAL MARITIME CUSTOMS MEDICAL REPORT. April, 1908.

By GEO. F. STOOKE, L. R. C. P., I-Ch'ang.

"I-CH'ANG FEVER."

Nomenclature.—Readers of the Annual Report of the Rankine Memorial Hospital, I-Ch'ang, for the year 1907, will doubtless have remarked upon the large proportion of in-patients entered as suffering from "I-Ch'ang fever." An apology is certainly needed for the name so impossible from a scientific standpoint. It is the general opinion that "Shanghai fever," "Ningpo fever," "Hankow fever," "Yangtze River fever", etc., are all one and the same disease, but is that really the case? Will all medical men, who every year meet cases of non-malarial fevers, compare their experiences with those detailed below, and then it will be known if in the different ports and inland cities of China we are really meeting the same infection, though classed under different names. Is our "China port fever" the same as the official "Simple continued fever" of India? In Calcutta that disease appears to be anything but "simple", and a recent number of the *Journal of Tropical Medicine* was bemoaning the fact of its very high mortality, and that practically nothing was known about it. "I-Ch'ang fever" has a mortality of under one per cent., so is rather more deserving of the epithet "simple". But though the mortality is so low yet the illness is very protracted, the patient is terribly weakened by it and convalescence is always slow, and should any of us venture to style their illness "simple" I am afraid our patients would be inclined to doubt the correctness of our diagnoss. "I-Ch'ang fever" usually commences as a "remittent fever", but that name should be sacred to the severer types of malaria.

Fifteen years ago while at school in Chefoo, I can recall several cases of fever which Dr. Douthwaite, a former president of the China Medical Missionary Association, announced as "diagonal remittent", and a glance at the charts accompanying this paper will suggest why such a terminology was employed. I cannot find such a name, however, in any books, and Dr. Douthwaite himself in his treatise on fevers in China does not use it, probably because the book was intended

for lay readers. In that same book, moreover, he confounds the "Treaty-port fever" with malarial remittent.

Native patients suffering from this fever usually come to hospital describing their ailment under the comprehensive term 寒病 han-ping, i.e., cold disease. This term is of course only descriptive of the initial prodromata when shivering and even rigors are often experienced, or the expression may possibly signify that the illness was brought on by cold. The natives here rarely confound it with malaria, for they recognise the very regular periodicity of even quotidian infections.

With all this choice of names before us what then shall we call it? Will some genius give us a suitable, descriptive, and scientific name?

Aetiology.—In our present state of ignorance the cause of the fever can only be guessed at, but its analogy to malaria seems to suggest that it is an infection caused by the bite of some blood-sucking insect. Of the many cases I have met with here the largest number have come from one house—a mission school. This building is situated at one end of a large shallow lake and quite near a series of paddy fields. Our commonest breeze (from the south-east) blows every afternoon through the hot weather across this sheet of water and would easily carry even low flying insects into the house. Extra precautions have now been taken in the shape of mosquito proof doors and windows, and it will be of interest to observe whether the percentage of fever in this school is thereby diminished.

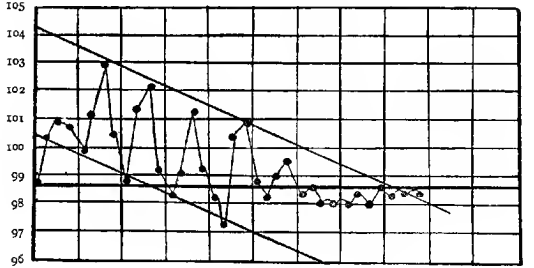
Examination of the blood in cases of "I-Ch'ang fever" is also highly suggestive of a protozoal infection, the proportion of the large mononuclear leucocytes being markedly increased as in malaria and trypanosomiasis.

Symptoms and Signs.—The illness is frequently initiated by a feeling of cold and shivering, but I have never seen so sharp a rigor as is common in malaria. Headache, backache, pains in the limbs are common as in any other acute infection. Some cases complain chiefly of nausea and actual vomiting, and this may persist, occurring every day when the fever is rising to its highest point. The fever is usually highest every afternoon and evening between 4 and 8 p.m. In a mild case the temperature will reach the normal line every morning, but in severer cases the fever is remittent in type. It is as a rule always lower in the morning than the evening. Some cases, without having taken any diaphoretic, will be troubled with excessive perspiration

often localised about the shoulders and the nape of the neck. At other times the sweats are drenching, necessitating constant changes of clothing. If the temperature rises to over 105° F. there will likely be some delirium. There are practically no other symptoms. The case is that of a simple (meaning thereby uncomplicated) and continued fever.

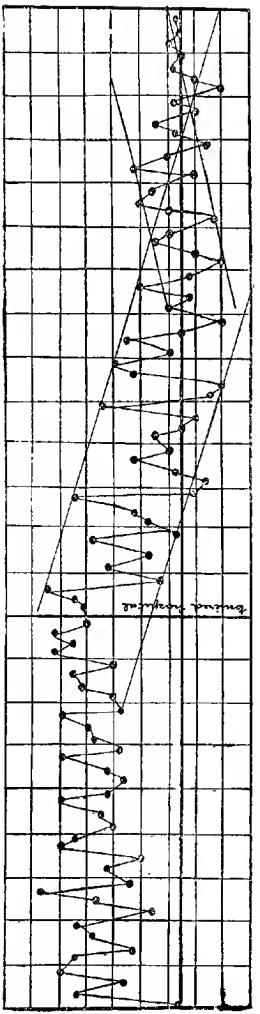
The signs to be found are equally unsatisfactory. The spleen is enlarged, but not markedly as in malaria and typhoid. It is slightly larger than normal, but only such as one would expect to find from the amount of fever present. I have never found any glandular enlargement, nor any rash. Indeed the diagnosis is made by excluding all known and named diseases, and having a case of simple and continued fever it is then named "I-Ch'ang fever."

Course of the Fever. — The temperature charts of these cases present, however, a very definite appearance which once recognised will never again be mistaken. I will briefly describe six cases, and their course may be studied by reference to the charts accompanying this paper.



CASE I.—M., aged 38, a foreigner.

Case I. This is typical of our simplest cases and is typical of the fever when it attacks strong and healthy males. There is usually an afternoon-evening rise of 101°-102° F. The morning temperature being 2°-4° less. The greater the differences between the morning and eveuing temperature the better of course for the patient, as he has a longer period of defervescence during the twenty-four hours. Each day the highest evening temperature will fall a little lower (usually half a degree) and the morning temperature will keep parallel to it, giving a parallel and diagonal marking to the chart. This I have suggested by lines. So exact is this lysis, as a rule, that by joining the highest temperature marks and carrying the line along the chart one is able to give the patient very exact information when the fever will be at an end. Disturbances of the diagonal line will of course occur from any mental work or excitement, departure from a milk diet, constipation, etc., etc.



CASE II.—R., aged 24, a foreigner.

Case II. This patient, a foreigner, had treated himself for nine days before entering hospital. He had during that time taken in all half an ounce of quinine, but with no good result. After admission the temperature was not so typical as an average case; that of the 11th and 13th days being quite deformed, and this may have been due to the quinine he had taken. These aberrations, however, never ultimately affect the normal diagonal which this fever takes. A slight relapse was threatened on the 19th day, but it came to nothing. Such relapses always show the same parallel and diagonal lines, but in an ascending direction.

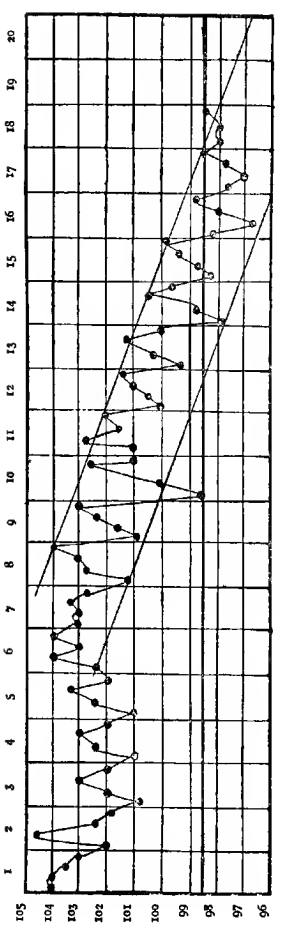
[See Charts on next pages.]

Case III was also a foreign patient treated in his own home until the 7th day and then coming into hospital. It is, however, quite common for the fever to keep on a high level, even with the best and most careful treatment for the first seven days of the infection. The parallel diagonals were well shown when once the fever began to get intermittent.

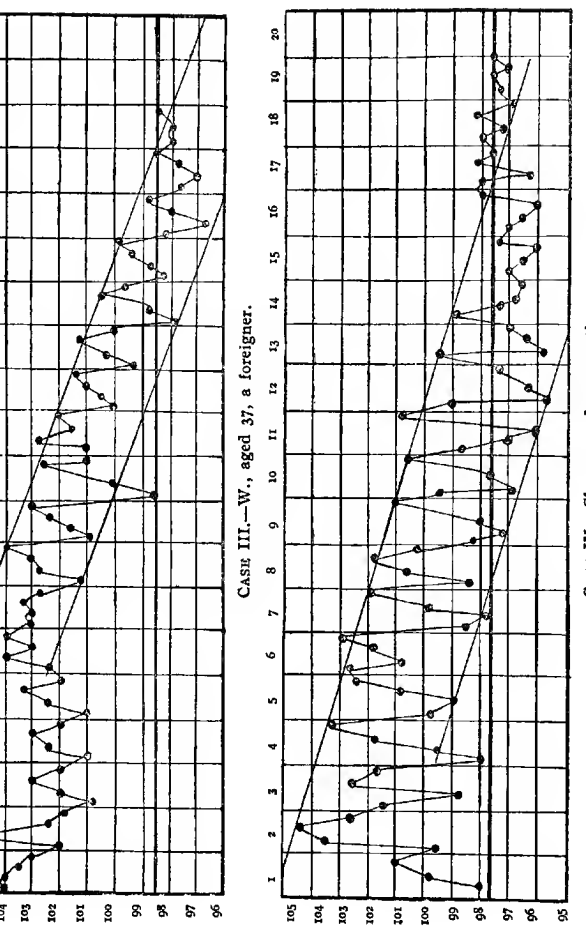
I may here state that in all these charts the observations were made by my native students, and many of the slight departures from the diagonal can be explained by their not exercising the proper care. They knew nothing of my parallel diagonal theory, so the charts are in no way "cooked".

Case IV. The patient in this case was a native. The chart was commenced on the 10th day of his illness, and from the history it was evident he had been suffering from a high remittent fever during that time, such probably as is seen in Case III. The prognosis in this case was good, as the difference between the morning and evening temperatures was 3°. In a blood film in this case was found what was considered a protozoal organism. It was present in very scanty numbers; only one being found in twenty slides examined. This slide has been sent to the London School of Tropical Medicine for corroboration.

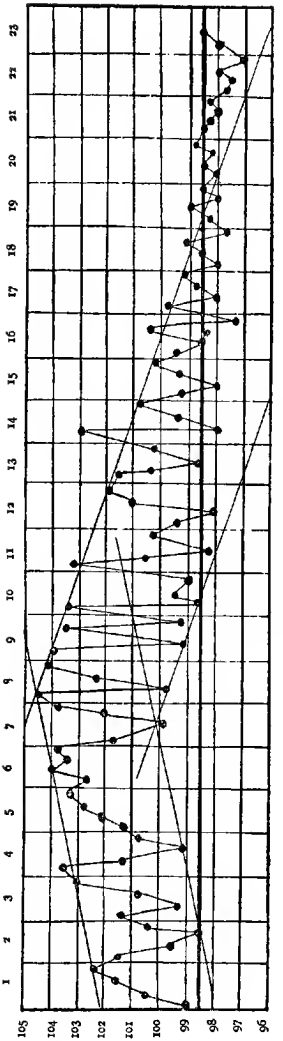
Case V. The experience during the first week in this case is unfortunately very common, the parallel diagonals running in the wrong direction. On the 9th day the patient was told she would probably be free from the fever on the 19th. This prognosis was made on the strength of the direction of the



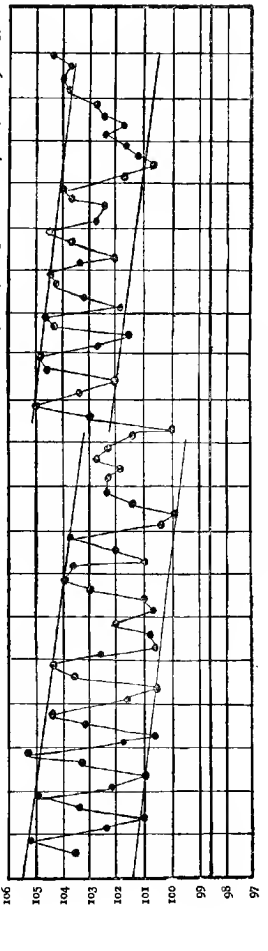
CASE III.—W., aged 37, a foreigner.



CASE IV.—Chang, aged 29, a native.



CASE V.—R., aged 36, a foreigner.



CASE VI.—N., aged 26, a Japanese.

diagonal line and proved correct. With a difference between the morning and evening temperatures of 4½° the prognosis of course was very hopeful.

Case VI. This patient, a Japanese, was the only case that terminated fatally in all the patients I have attended during the past eight years. Drenching perspirations were a rather unusual feature in this case. On the 11th day of the fever a decided change for the worse took place, when a new and higher parallel diagonal temperature occurred, which terminated on the 17th day in heart failure and in death on the 19th.

Blood Examination.—The red cells are normal in size, colour, and number. The white cells, while normal or reduced in number (I have never met a leucocytosis), are markedly altered as regards the normal proportion of their different constituents. The percentages of white cells in my cases work out as follows :—

	Normal.	*"I-Ch'ang fever."*
Lymphocytes	10-25 per cent.	12 per cent.
Large mononuclears	5-10 ,,	26 ,,
Polymorphonuclears	65-75 ,,	59 ,,
Eosmophiles and Basophiles ...	2- 4 ,,	3 ,,

In Case IV as before mentioned a new element was found lying among the red cells. It was a sausage-shaped body in size 8m. by 3m., a little larger than a malarial crescent. Using Leishmann's modification of the Romanowsky stain two red chromatin dots could be seen lying in the centre of the body. The general matrix stained blue. No clear space was anywhere seen resembling a vesicular nucleus and there was an entire absence of all pigment. No vestige of any red cell was seen about it; it appeared to be present free in the blood plasma. Although many other films from the same case were examined no other similar body was ever found. If it is the cause of this fever it will therefore be a rare visitant of the peripheral blood and will probably multiply in the internal organs. One has witnessed so many such "discoveries" come to naught that no more need be said about this until some confirmation comes from home. It will be well though for all working at stained films of the blood of this fever to make most diligent and painstaking search in the hope of finding such occasional visitants.

Diagnosis.—From malaria fever it may be differentiated by the entire absence from the blood of the malarial parasite in any form. Pigment bearing leucocytes are never met with, and this fever never responds as does malaria to the therapeutic test by quinine.

We frequently meet with cases of enteric fever in I-Ch'ang, and there is never any difficulty in separating the two fevers. The entire absence of rash, no abdominal disturbances, and a much smaller spleen

OPENING OF THE AMERICAN PRESBYTERIAN HOSPITAL, CHENCHOW, HUNAN.

easily separate the two fevers and moreover the blood picture of the two is quite different. Typhus would only be confounded with "I-Ch'ang fever" in the early days of the illness.

Treatment.—The patient is kept in bed and put on a milk diet. No drugs are really necessary, and quinine only distresses the patient unnecessarily. I usually, however, prescribe regular doses of phenacetin, 10 grains every four hours, combined with the citrate of caffeine to prevent cardiac depression. This is employed not as a curative agent but to minister to the patients' comfort. I have tried Warburg's tincture, methylene blue, cinnamon, and many other drugs, but all seem equally useless. With rest in bed, a light milk diet, and phenacetin, the patients are soon quite comfortable, the temperature begins to break, and gradually falls by lysis in the manner previously described.

Convalescence is sometimes very protracted; the too sudden assumption of any solid food, the mental excitement of writing a letter or receiving a home mail being often sufficient to cause a relapse.

When the fever has become normal for three days the patient is gradually weaned from the phenacetin and a good tonic is substituted. In persistent cases of relapse a holiday is necessary, preferably a sea trip.

The foregoing description of our "I-Ch'ang fever" is written in the earnest hope that other medical men who meet such fevers herein described, will compare them with the typical cases I have placed on the charts. This paper is only intended to be a basis for future study. Let us know first if the non-malarial fevers met with in different parts of China present a similar clinical picture, and then, with many minds working at it, advances in our knowledge of aetiology and treatment will assuredly be made.

7th April, 1908.

OPENING OF THE AMERICAN PRESBYTERIAN HOSPITAL AT CHENCHOW, HUNAN.

On February 19th the first hospital of foreign construction in the southern half of Hunan was opened at Chenchow with considerable display for a city so far in the interior. Letters of invitation had previously been sent to the Governor at Changsha, more than 700 *li* away, and to the Taotai at Hengchow, more than 300 *li*, simply wishing them to know of our work, and never hoping for anything more than

letters of congratulation. But these wide-awake officials, wishing to know of the real progress going on in the farthest parts of their province, each sent overland an official to represent them at our opening exercises. This was at a tremendous discomfort, and considerable expense, as the former was ten days and the latter five, coming through an almost constant rain to reach Chenchow in time. The local *Chow* official did very much in making the day a grand success. The military official sent guards and a corps of buglers to furnish classical music for the occasion. The gentry of the place, as well as the teachers and large shopmen, turned out *en masse;* the former presenting a most beautiful silk banner, some 20 by 5 feet in dimensions, and the latter presenting beautiful glass lauterns and other ornaments. The new hospital was gaily decorated with flags and pictures and really presented a beautful appearance when the assembly room was filled with the officials and gentry in their gay robes. The exercises began about 12 noon, with a few words of welcome by Dr. Lewis, the builder and physician in charge. Our Chinese evangelist then read several appropriate selections from the Scriptures and led in prayer, after which the Governor's and Taotai's representatives and our local *Chow* official in turn made very complimentary addresses, seeming to truly appreciate and hope for the continued success of our hospital work in this place. Mr. Locke, of our staff, and Mr. Han, of our school, explained fully our object in coming here and providing this very large field with the blessings that a hospital may bring. Mr. Scholes brought greetings from the Wesleyan Mission and Mr. Mitchell pronounced the benediction. The songs sung, which seemed to please the audience highly, should not be forgotten. They were, "All people that on earth do dwell", "The Great Pbysician", and "God Save the Emperor".

A foreign banquet was served immediately after the exercises to the officials, gentry, and foreigners, numbering twenty-five in all, which all seemed to enjoy. After a minute inspection of the entire hospital premises by all these guests, and an assurance by the visiting officials that they would make a good report of the hospital to the Governor and Taotai, they departed, after one of the happiest days for us all since comiug to Cbina. The three following days guests from among the large shopmen, teachers, and workers were invited to Chinese feasts.

The hospital, which is 85 by 55 feet, while not large, has had a grand opening, a good advertisement, aud we all hope it may be a mighty instrument in the saving of men's souls as well as their bodies.—From STEPHEN C. LEWIS'S letter.

THE NEXT MEETING OF THE CHINA MEDICAL MISSIONARY ASSOCIATION.

It is probably quite time that active steps should be taken toward the organization of the next meeting of the Association. The Central China Medical Missionary Association courteously requested that the meeting might be held at Hankow. This fixes the place. The time will be either April or May, 1910. The exact date will be notified through the JOURNAL later. The Central China Medical Missionary Association will be the Committee on Arrangements and Entertainment, with power to appoint a Local Executive Committee. This committee will provide a place in which to hold the meetings and will arrange with hotels and private houses for boarding accommodations for those in attendance. It, in co-operation with the President, the Secretary, and the Editors, will have charge of invitations to fraternal and other delegates and guests.

The Committee on Programme, the members of which will either prepare, or secure the preparation of papers to be read before the Association, shall be as follows:—

Dr. Jefferys, Chairman, and for the Shanghai Branch.
Dr. Booth, for the Central China Branch.
Dr. Avison, for the Korean Branch.
Dr. Phillips, for the Manchurian Branch.
Dr. Hume, for the Kuling Branch.
Dr. Peill.
Dr. H. Stanley Jenkins.
Dr. Freeman.
Dr. Stooke.
Dr. Venable.
Dr. Cole (of Ningpo).
Dr. Mackenzie.
Dr. J. Preston Maxwell.
Dr. Kuhne.

This Committee may appoint a sub-committee from among its number to arrange the programme, provide for its publication, and do such other work as may be desirable to be done in connection with this matter.

The Committee on Revision of the Constitution shall consist of Drs. Beebe, Cousland, Venable, Park, and Stuart. Inasmuch as this committee should take ample time to prepare its report before the time of the Association meeting, it was thought advisable to have its members within easy reach of each other. Hence the local character of the committee. The relation of the Branches to the General Association is thought by some to need revising; the question of the reception of Chinese graduates as members of the Association has come up for consideration, and other alterations are proposed. The committee will be glad of suggestions and criticisms from any member of the Association, if early sent to Dr. Cousland or the Editors of the JOURNAL.

By the PRESIDENT.

The China Medical Journal.

VOL. XXII. JULY, 1908. NO. 4.

The yearly subscription to the China Medical Missionary Association is $4 Mex., payable in January of each year. This includes the JOURNAL and postage on the same, whether local or foreign.

All changes of address, departures on and arrivals from furlough should be notified to the Secretary and to the Presbyterian Press. Members are requested to invite new comers to join the Association.

The Editors will be obliged if all those who are building hospitals will send copy of plans and detailed description (in duplicate if possible). These will be loaned, on application, to members who are proposing to build.

Editorials.

The Conference of 1910.

It is a long cry to the Spring of 1910, but the president has been wise in appointing his committees early, as will be seen in this issue, and with two years for organization and preparation, we have no excuse for not producing the "best thing ever yet". The conference will be in Hankow and that in itself should be reason enough for a general effort to attend. It is the central spot of China for a general gathering. And the arrangements will be in the hands of our most energetic and successful branch.

The first and foremost matter is the programme. It cannot be gotten at too soon and it will be gotten at once. The chairman of the programme committee has a few ideas which he believes will tend to produce a quality of fruit which for flavour and nourishing power will approve themselves even to the maturing appetite and intellectual gastronomics of the Association.

Perhaps the chief feature of the programme will be a final and complete report by the chairman of the first research committee on its three years' fecal investigation, the preliminary section of which appears in this issue.

There will be submitted also, at least to be read by title, a study on the nosogeography of China which may be a basis of the appointment of a subsection of the research committee to work it out.

There must be some positive discussion of the patent medicine question, which is becoming unendurable.

And there must be a couple of strong papers on medical education. The day of the small fry is passing and we are to do something larger or give it up.

The plan of the chairman will be to subdivide the large committee into sections of three and to make each section absolutely responsible for the preliminary production and arrangement for definite parts of the programme. For instance, one section will have the educational interests in hand, another a general exhibit, microscopic and macroscopic of fecal specimens and intestinal parasities, to represent the findings of the association from all sections of the country.

Suggestions are cordially desired, and all such will receive prompt and careful consideration. New and original features, especially in the way of demonstration, will be most welcome. It will he urged that business matters be put in as well digested a form as possible, especially the report of the Constitution committee, in order that it may be possible to have the larger part of the time for more interesting matters.

* * *

The Gentle Business of Poisoning.

Opium is subtly bad, but the trade in *Patent Medicines* reeks with filth and stinks to heaven with its gross and abominable selfishness. Immoral, like the rape of innocent and defenceless women, it preys upon the helpless, the ignorant, the little ones, and pollutes them. Greedy, unscrupulous, pitiless, plausible, it gathers in its arms the great company of the feeble ones and slowly robs and poisons them. The press grows fat on it, church papers make two ends meet thereon—the end of finance and the tail end of morals. Even the little-minded doctor is flattered by the attentions of the drummer and prescribes he knows not what for the disease he knows not where. This grinning horror is feeling its way to the pockets and stomachs of the millions of China.

China has no pure food law, and at the same time the Chinese are the greatest race of medicine eaters on the face of the whole earth. China is at present the very "easiest thing" that the patent medicine trade has ever struck, and that is saying a great deal. China is already gorging patent medicines. And not only is the best and the worst of the original foreign tribe of patent horrors upon the market, but something even worse than that—the abundant Japanese imitation and attempt at the original horror. Now when a foreign fake is guaranteed to cure positively an absolutely incurable disease, and this fake is imitated and forged by a Japanese fraud, the resultant good to China we leave to your fertile imaginations.

We are convinced that more harm, if this thing goes on unchecked, will be done to China through patent medicines than opium has ever approached the doing. Please make no allowances for us in this matter. We are not speaking without thought. We said this thing a year ago in print and again at the Medical Conference last spring, and there are many who know that this is true.

Meanwhile please remember *it is a sign of weak mentality to take or to prescribe patent medicines, of which neither the taker, nor anyone but the maker, knows the contents.* We recommend this formula to all takers of patent medicines: Pour out a dose, hold it up before a full length mirror and say these words, "I do not know my disease, neither does the maker of this dose. I do not know what is in this dose, except that it certainly is not merely what it says it is; moreover, it probably contains a dangerous drug, or more than one. I preach against alcohol and opium. This dose probably has both. It may be only a cocaine or an acetanilid mixture. I do not know how much it has of anything. Many lovely lives have become drunken or drug-bound by doing what I am going to do. I am mentally deficient and I am intemperate to the extent of being a fool." Then the dose should be taken, and the routine of preaching against tobacco and alcohol should be proceeded with under the stimulus of alcohol and morphine.

Your example and your prayerful consideration of the Chinese people are asked for along the suggested lines. When the time for action comes, we shall count on this Association.

* * *

Hospital Economics.

A paper read before the C. C. M. A. appears in our columns, which will be of interest to the many medical missionaries scattered throughout China. We refer to the paper on "Hospital Economics" delivered as the Presidential Address by Dr. John MacWillie, the new president of the Central China Branch of our Medical Missionary Association. It is practically a review of what has been done by that Society during the last few years to diminish the annual expenditure on drugs, and clearly proves that combination is productive of great benefit to the hospitals in Central China. We have in the past held up the example of this branch of the C. M. M. A. as worthy of imitation by the other branches scattered throughout China, and

now once again we desire to do the same. By purchasing along the lines laid down in the paper above referred to it will be possible for all hospitals to save a percentage, large or small, according to the size of order, every year. We need not point out that a saving which does not involve the question of efficiency is always worth trying for. What we do object to, and what we would be the last to give our support to, is a saving that is made at the cost of efficient working. In the C. C. M. A. the saving made has not in the least interfered with the efficiency and quality of the work done. A scheme to unite all the hospitals in China is possible of being worked, but not from Hankow as centre. It may be possible in the near future to have a purchasing committee in Shanghai from where it would be easier to manage the distribution. At present, however, it might be sufficient for each large branch of our Association to manage for its own district, and then at our next triennial meeting it may be possible to devise some scheme by which the whole system may be unified.

* * *

Triennial Meeting of the C. M. M. A.

The Central China branch of the C. M. M. A. have already elected a committee to make arrangements for this meeting. It is desired to make the next conference a notable one in every way. We shall be glad to have suggestions from any and all sent in, and you may be sure that all will be attended to. It is true that the conference is still two years off, and it may be that some of us now so interested may not be here then, but still though we may be gone it does not follow that there will be no conference. In fact some might say that the conference might be better if some of us were gone. Still we don't anticipate any such remarks, and we are all determined to to do our little best to make it a success, and if we all enter into the arrangements in that spirit the conference will undoubtedly be a success. Keep the matter before your minds, and should any happy thoughts or brilliant ideas strike you, make a note of them and forward them to us in due course.

* * *

The Referendum.

Circumstances have recently shown the desirability of the Association strengthening the hands of its members by making a representation to the home Boards on three points. These are :—

1. The necessity of a thorough practical course in tropical medicine before coming out.
2. The necessity of thoroughly screening mission houses in malarial districts. (See Dr. Maxwell's paper.)
3. The necessity of Boards allowing time and paying the fees for a good course of postgraduate studies while on furlough.

The Executive wishes a referendum on these points. Voting papers are enclosed with this number. It is of the utmost importance that every one should express an opinion so that the Association can send a weighty representation to the Foreign Mission Societies and Boards.

ASSOCIATION NOTES.

BRANCHES OF THE C. M. M. A.

Central China Branch :—Dr. J. G. Cormack, Hankow, Secretary.
Kuling Branch :— Dr. W. A. Tatchell, Hankow, Secretary.
Manchurian Branch :— Dr. W. Phillips, Newchwang, Secretary.
Korean Branch :— Dr. H. H. Weir, Chemulpo, Korea, Secretary.
Shanghai Branch :— Dr. A. W. Tucker, St. Luke's Hospital, Secretary.

NEW MEMBERS OF THE C. M. M. A.

Joined through the China Medical Journal.

RUSSELL E. ADKINS, M.D., Univ. of Penn., A. B. M. U., Swatow.
ROBERT A. ANDERSON, M.D., Rush., Hauges Synod M., Fancheng, Hupeh.
JESSE H. BALDWIN, M.D., Univ. of Kansas, Meth. Episcopal, Taianfu, Shantung.
EMMA E. MARTIN, M.D., North-western U., Meth. Episcopal, Tientsin, Chihli.
FRANCES L. DRAPER, M.D., Chic. Homeop. Col., Polyclinic Postgraduate, Meth. Episcopal, Singiu, Fukien.
FRANCIS J. HALL, M.D., Johns Hopkins, Balt., Am. Pres., Peking.
JOHN KIRK, M.B., Ch.B., Edin., New Zealand Pres., Brit. P. O., Canton.
MARCUS MACKENZIE, B.A., M.B., C.M., C. M. S., Foochow.
H. R. PAKENHAM, M.B., B.Ch., Dublin U., C. M. S., Kienningfu.
HANS REBER, M.D., Basle Univ., Private practice, Canton.
JESSIE JANE STOOKE, L.R.C.P. and S., Edin., Ch. of Scot., Ichang.
JOHN MAITLAND STENHOUSE, M.B., B.C. Cantab., Union Med. Col., Peking.

Joined through the Shanghai branch :—

Dr. F. C. FULLERTON, Am. P. E. Mission, Shanghai.

PUBLICATION COMMITTEE.

SUBSCRIPTIONS.

M. E. Hospital, Chungking, per Dr. Freeman	$20.00
Dr. Aitken	10.00
Dr. Somerville	5.00
Dr. Fowler, for 1908	20.00
Dr. Mary Ketring	5.00
Dr. Chas. W. Service	10.00
Dr. Mabel Poulter, for 3 years	30.00
Dr. F. F. Allan	15.00
Anon...	2.25
Foreign Am. Reformed Church Mission.	222.00
Foreign Christian Missionary Society ...	228.30
Dr. A. A. MacFadyen, A. P. M., South ...	10.00

Brought forward			577.55
Per Dr. J. B. Neal :—			
Mr. J. S. Lawson ...	Gold	$10.00	
Mr. N. Tooker		100.00	
Dr. J. S. Stokes		10.00	
Mrs. J. S. Stokes		10.00	
Mrs. L. Richards		25.00	
Per Dr. Griggs :—			
Dr. J. A. Lichty		5.00	
Foreign Miss. Board :—			
S. Baptist		100.00	
Shanghai Branch		10.00	
	Gold	$270.00	610.70
			$1,188.25

JOSEPHINE MAY BIXBY, M.D.

An Appreciation—By Mrs. A. M. Bacon.

That life is long which brings something to pass, which accomplishes noble ends, which builds for the future, which lives for others and for eternity.

Between May 5th, 1860, and June 16th, 1907, a life began, developed and ripened, which was destined to take a conspicuous place in missionary history. Josephine May Bixby laid good foundations. The public schools and Iowa University, together with courses in the Illinois Training School for Nurses, the Woman's Medical College of North Western Uuiversity, and the Illinois Charitable Eye and Ear Iufirmary, fitted her for effective work. Above all she was a child of God, a student of His Word; she took this trainiug that she might the better serve Him in far off lands.

Thus equipped, she was sent to Swatow, China, in the autumn of 1894. Kiehyang was then an out-station of Swatow, and the medical work was in the hauds of Dr. Scott, with whom she visited this out-post. Together they treated many patients a week; Dr. Bixby devoting herself to the eye cases, which are so numerous in China.

Her spirit of enterprise and independence led to her assuming the work at Kiehyang a little over a year after reaching the field. On this removal she says: "I have asked God to let me take up active work for these people just as quickly as possible, and He has already placed the plow iu my hand and my feet in the furrow." She opeued the hospital for regular dispensary work and introduced religious services both morning and evening with the patients. Five years later she tells of her purpose that no one should leave the hospital without some knowledge of the true God. Many of the patients became believers and have since told the good news in their own villages. Thus the medical work opens doors for the true doctrine and proves our Gospel to be one of mercy.

The hospital accommodations were soou outgrowu, making imperative for the general work the use of the chapel, which had previously served as a home. This change involved great inconveniences for Dr. Bixby; accordingly she set herself valiantly to overcome these difficulties by years of patient and persistent appeals, first for hospital

enlargement, then for a new woman's hospital. Her work at Kiehyang was somewhat interrupted by ill health and by caring for the Swatow medical work while Dr. Scott was on furlough.

She writes: "Opium smokers continue to come with their sallow faces and dejected looks, and after two weeks return to their homes, thankful to be rid of such a bondage. This treatment has been the means of saving some, body and soul."

In 1899, Dr. Bixby commenced training a class of women in medicine at Kiehyang; she was at this time cheered by the promise of a new house for herself and her associate. The work continued to grow, and the next earnest plea was for a man to lift the burdens and care for the department for men patients. The desired missionary home was finished in 1900, although the work had been hindered by the Boxer uprising and Dr. Bixby's furlough.

She spent much time and strength while in the home-land soliciting funds for a new hospital. Baffled by no discouragements at home in America, or at home in China, she presented the claims of that rapidly developing work until she won. The money came, the plans were approved, and the dream, nay, the purpose of her life was realized. During the time of construction Dr. Bixby was the only missionary at the station. She gave oversight to Mr. Speicher's work as well as to the army of builders until the long-wished-for "True Doctrine Hospital" was completed and dedicated.

Was her joy-cup too full? Or had this strenuous life sapped her vitality? In November, 1905, she had an attack of pleurisy. Though counting herself fully recovered, her strength did not return. She lost ground in the early months of 1907, and when spring came, was ordered home. She yielded with the strong conviction that this was the road to health and to the resumption of her chosen work. Six weeks of hospital treatment in Denver failed to bring back the boon she sought. She suffered uncomplainingly, hoping and expecting to return to China. There came a day, however, when the doctors told her there was no hope of recovery. Then this woman of energy, of purpose, of courage, her life work before her, calmly said: "The Lord's will be done." She fell asleep at the dawning of the Sabbath, June 16th, 1907.

The Kiehyang hospital is a fitting monument, a memorial building for which she gave her life. Born in Iowa, educated for her profession in Illinois, and supported by Minnesota,—these three states lay special claim to this self-sacrificing missionary. But it is Chinese women and children who are the mourners to-day.

A correspondent writes:—

"The motto of her mission life seemed to be, 'This one thing I do.' And how efficiently she did it, how lovingly, how winningly. We were present at the opening of her beautiful new hospital, so lovingly, so wisely planned, and remember how happy she was in showing us the result of her work and how joyfully she was looking forward to seeing it filled with suffering Chinese women whom she longed to help. She introduced us to her young women, whom she had selected to be trained as helpers and was full of enthusiasm as to her plans for the future. At last she had a building into which no man patient or helper would be admitted. But God's thoughts are not as ours. He had already marked His servant for higher service. Little did we think that the crowning day of her hopes and aspirations was the closing day of her work. Her last illness had already begun."

Book Review.

Folia Therapeutica.

I have before me the fourth issue of *Folia Therapeutica*, and find myself fascinated by it. Published by a firm which already commands our gratitude for its bi-weekly contribution in the shape of the *Journal of Tropical Medicine and Hygiene*, one feels completely assured of its value when he sees among the names of contributors those of Clifford Allbutt, Bier, Lauder Brunton, Ewald, Thomas Fraser, van Noorden, Byrom Bramwell and many others. As the publishers have well said, "the number of new remedies being brought before the medical profession has become so great" that the busy practitioner, especially the short-handed medical missionary, finds it an utter impossibility to keep pace with the advance of therapeutics. Nor have we the opportunity for accurately testing new methods of treatment or new preparations. It is, therefore, with great satisfaction that we hail this new journal, which is "to devote itself to publications on the progress of modern therapeutics and pharmacology and to present the methods of treatment and preparations which can be safely recommended for use, and which constitute a real advance in therapeutics. The issue for October, 1907, contains twelve original articles, all of which are refreshing and of intensely practical value. Three articles on the treatment of tuberculosis, written from different view-points and commending lines of treatment which are all within our reach, make this number of special interest to us in China. Two others on the uses of hydrogen peroxide will appeal to the more surgically inclined and to the otologist. Ewart discusses pneumonia in a way that shows the tendency of modern medicine to first inquire into the deep significance of the relations between the etiological factor concerned and the patient. He discusses the treatment of pneumonia in private practice, and in this issue considers first the pneumococcus and the patient.

And not without great use to us all are the last pages of each issue, in which are found (*a*) Abstracts from articles on therapeutics, (*b*) Reviews of books on therapeutics, (*c*) Current literature on therapeutics, which is an alphabetical list of diseases and remedies, giving the most recent literature on each from European and American journals.

The subscription price is but 4 shillings a year, postage free, and the journal may be ordered directly from John Bale, Sons and Danielsson, Ltd., 83-91 Great Titchfield Street, Oxford Street, W., London.

E. H. H.

Medical and Surgical Progress.

Internal Medicine.

Under the charge of EDWARD H. HUME, M.D.

Therapeutics. — The "Practical Therapeutic Referendum" by Dr. H. R. M. Landis, of Philadelphia, which forms the concluding article in the December issue of *Progressive Medicine*, is one of the sanest reviews of the therapeutic contributions of 1907 that has been put into print. Getting samples of all sorts of new synthetic drugs and reading articles and seeing advertisements of many others, we are apt to be confused as to what is good and what may be set aside as without value. Let me commend this article to all who want to know of real progress. I will cull a few of the helpful suggestions.

Bicarbonate of Sodium has been used for years for the relief of gastric pain and hyperacidity of the stomach. According to Meunier (*Lancet*, January 19th, 1907) the following theory underlies its use. The gastric pain is due to an excess of hydrochloric acid, which causes no incouvenience during digestion, owing to its absorption by the food. When the stomach is empty, the acid begins to exercise an irritating action upon the sensitive nerves of the mucosa. The administration of sodium bicarbouate at an interval of two, three or four hours after the meal results in the relief of the pain. Meunier, in testing the validity of this theory, found that pain was almost always most severe when the secretiou of hydrochloric acid was at a miuimum. Insomuch, however, as pain was nearly always relieved by sodium bicarbonate, he was led to ascribe its good effect, uot to auy neutralizing actiou but to the production of carbon dioxide, which exerts a calmative effect in gastric pain. If this hypothesis is correct, Meunier believes the administration of sodium bicarbonate alone is a poor method of producing the carbon dioxide, inasmuch as its therapeutic action is proportional to the quantity of hydrochloric acid present and is liable therefore to great variations. Additional objections are that the neutralization of the hydrochloric acid retards digestion as pepsin acts only in an acid medium; furthermore, the investigations of Pawlow have shown that the acidity of the gastric juice is a specific excitant of the pancreatic gland. Meunier therefore suggests that the carbon dioxide be produced by means of tartaric acid and a mixture of carbonates given so as to slowly and coutinuously evolve the gas without modifying the acidity of the gastric juice. For this purpose he advises that the tartaric acid be prescribed iu 1 gramme (15 grain) powders and the carbonate powders be made up of sodium bicarbonate 0.4 gramme (6 grains), calcium carbonate 0.3 gramme (4½ grains), and hydrated magnesium carbonate 0.2 gramme (3 grains). The patient is directed to add an acid and an alkaline powder separately, each to half a glass of water, and, when the pain begins, to take alternately tablespoonful doses of the acid and alkaliue mixture. Clinically he has fouud that this plan is much more efficacious in relieving pain than is sodium bicarbonate alone.

Diet.—As with drugs, so with *medicinal foods*, the statements of

the manufacturer have been blindly accepted because of a lack of knowledge of dietetics. The Council of Pharmacy and Chemistry of the American Medical Association has been doing praiseworthy work (*Jour. A. M. A.*, May 11, 1907) in investigatiug the food value of a number of pre-digested foods. These should receive great publicity, so important are the conclusions reached. "In order to get a fair conception of the actual food value of these various preparations, it is desirable to make some comparison which can be readily comprehended by every physician. The amount of good milk necessary each 24 hours to sustaiu the vitality of a patient during a serious illness is not less than 64 ounces or approximately 2,000 c.c. The food value in calories represented by this amount of good milk may be placed at 1,430. This includes not only the proteid and carbohydrate matter, but the fat as well. By comparing this available potential euergy with the total energy available in the pre-digested foods under consideration, it can be readily seen that if a physician depends on the representations made by some of the manufacturers, and feeds his patients accordingly, he is resorting to a starvation diet. The largest number of available calories, including alcohol, present in any of the recommended daily doses, is less than one-fifth of the numher of calories represented by 2,000 c.c. of milk, and the calories represented by the daily dose of the preparation poorest in food products is only one-twenty-fifth of the amount present in 2,000 c.c. of milk. These figures tell their own story. Making 2,000 c.c. of milk the basis of calculation, and estimating the amount of the various preparations required to yield this uumber of calories, it is found that the quantity to be administered daily to supply 1,430 calories, including alcohol, varies from 716.2 to 1,506.2 c.c. In other words, it will be necessary, in order to supply 1,430 units of energy per diem, to administer the amount of the various products in quantities found within the above limits. In many cases the amount of alcohol exhibited by these quantities would keep the patient in an alcoholic stupor continually. The cost necessary to supply this energy varies from $1.48 to $3.39 (gold). Compare these prices with the cost of two quarts of milk. In commenting on these results of the Council of Pharmacy, Edsall states that the common use of medicinal foods largely depends on three factors. (1). Their nutritive value is thought to be very great. He often calculated the actual calorific value of the day's ration of patients who, at the advice of their physicians, were usiug these foods as a considerable part of their diet. It was found, as a rule, that such patients were taking, at most, one-third of what they actually required to maintain nutrition. Such patients suffer from more or less severe starvation, and not a few of them have died of starvation. (2). The names of a number of these preparatious can be easily remembered, while it takes more trouble to acquire a knowledge of a variety of simple and cheap preparations that can be readily prepared in the home. (3). It is often thought that these medicinal foods are borne by a disordered digestive tract, when other foods are uot. Edsall thinks this an erroneous view, and that only a moderate degree of skill and resource in using simple home-made preparations renders the temptation to use "prepared foods" very slight. He admits that there are a few very capricious patients for whom it is essential to provide variety in addition to the necessity

of providing an adequate amount of nourishment, but these cases are rare. In regard to the alcohol coutent he says: "Would it not be utterly irrational to be obliged to give a small dose of strychnine, for instance, with each small portion of food; aud to be obliged also every time that one increased the food, to increase coincideutly from oue to four times the amount of strychnine one was giving?" Aside from the possible intoxicatiug effects of the alcohol, even small doses irritate the stomach.

(Now that milk, at least in condensed form, is becoming available in all parts of China, it is satisfactory to know that we ueed not feel ourselves deprived of what is life-saving or important because we have not at hand all the latest fads in prepared foods.—Ed.)

Magnesium Sulphate. — Three new uses of this drug that we order by the cwt. from Hewlett are discussed in the literature of 1907. 1. For general anesthesia. The basis of this observafion lay in the experimental work of Meltzer, who, reasoning from the fact that as sodium and calcium salts had distinct stimulating properties for some of the functions of the animal organism, magnesium salts, on the contrary, which are fouud plentifully in the tissues, might possibly have an iuhibitory action on these same functions, undertook a series of experiments. With Auer, Meltzer found that subcutaneous injections of magnesium sulphate did produce real and lasting anesthesia. He eventually recommended intraspinal injections of the salt in uian for the purposes of general anesthesia. To December, 1907, 14 cases were recorded in which this method was adopted. There is apt to be elevation of temperature, retention of urine. and undue slowing of respiratiou. The method, therefore, is only mentioned to show that it is not yet ready for general adoption.

2. For the treatment of tetanus. Here also the work has followed the suggestion of Meltzer. Robinson reports six cases (*Journal A. M. A.*, August 10th, 1907). The procedure is as follows: Lumbar puncture is performed and the spinal fluid allowed to escape. 1 c.c. of a 25 per cent. solutiou of magnesium sulphate for about each 20 pounds of body weight is then quickly injected. In Robinson's case three such injections were made and were followed in each iustance by the greatest relief. Within a few minutes the rigidity of the affected muscles lessened and soon became entirely relaxed. After about twelve hours there was a return of the symptoms. The second injection followed 18 hours after the first, and its good effects lasted about three days, when, with a return of the symptoms, the third and last iujection was given. Absolute quiet and sedatives (bromide and chloral) are used in conjunction with the intraspinal injections. Recovery followed in three of the six cases. In one of the three that recovered, antitoxin had been used without success. Tetanus antitoxin is usually unavailing in cases of acuet tetanus, after the uuion has occurred between the toxin and higher nerve centres. The failure of other methods in dealing with acute tetauus should therefore lead in the future to a very thorough trial of the injection method with magnesium salts. Aud in all reports the incubation period of the attack of tetanus should be given.

3. For the relief of pain in acute inflammatory conditions. Meltzer, again, must be given the credit for the observations leading up to this therapeutic use. He will doubtless go down to posterity as the scientific re-discoverer of magnesium sulphate. Tucker (*Therap. Gazette*,

April, 1907) reports as follows: The application consists of a saturated solution of magnesium sulphate in water. It is applied on from 15 to 20 thicknesses of ordinary ganze. This is saturated with the solution at least every half hour, or as often as is necessary to prevent drying, depending on the time of the year and the temperature of the room. The ganze is not removed for 24 hours. The parts are then washed with water and the dressing re-applied if necessary. There is then found to be a marked blanching of the surface, which is not followed, however, by any deleterious effects. The remarkable anesthetic effects of the solution was shown from the fact that the attendants who made the applications experienced a partial loss of sensation accompanied by tingling of the arms and hands. This persisted for from 12 to 24 hours. The conditions in which Tucker used the magnesium sulphate were gonorrheal epididymitis, other painful affections of the testicle, various painful joint conditions (acute rheumatism, gonorrheal arthritis), erysipelas, ueuritis, sprained ankles, and simple contusions. The applications always relieved the pain in a few hours. Swelling of the testicle and redness and swelling of a joint usually subsided in from 24 to 36 hours.

Pathological Notes

Conducted by JAMES L. MAXWELL, M.D.

The age incidence of 109 cases of opisthorchis sinensis infection in Cantonese: its small pathological importance. By Dr. C. N. Haenly, Acting Bacteriologist, Hongkong. *Journal of Tropical Medicine*, 1st February, 1908.

In the *Journal of Tropical Medicine* for 1st October, 1907, there is an article entitled "Liver Abscess due to Opisthorchis Sinensis, Pus in Pericardium." The writer brings forward no evidence to show that the abscess was caused by the parasite O. Sinensis, except that he found these flukes present in the liver, and that the stomach and intestines were normal.

The literature of tropical medicine abounds with instances of common parasites being mistaken for causes of disease until further investigation has shown the parasite to be as common in the healthy population as in the sick. The patient in the case related was a Cantonese aged 31, and twenty-four flukes were counted. It will be shown below that this is about the average number of flukes to be found in the livers of Cantonese in the age period 30 to 35.

About eighteen months ago I started to investigate the age, sex and class incidence of the disease in Cantonese. Three hundred livers, taken without selection, were carefully examined and two points of interest came out, namely, the exceeding prevalence of the infection and

TABLE SHOWING AGE INCIDENCE OF O. SINENSIS IN 300 LIVERS TAKEN WITHOUT SELECTION.

Age.	With flukes.	Without flukes.	Total examined.	Percentage with flukes.	Average number of flukes found in livers infected.	Extremes.
0- 1 year	...	33	33	...	...	...
1- 5 years	1	40	41	2	1	1
5-10 ,,	1	19	20	5	10	10
10-15 ,,	2	10	12	16	7	4- 40
15-20 ,,	6	15	21	28	about 12	1- 50
20-25 ,,	9	18	27	33	,, 29	1-110
25-30 ,,	21	20	41	51	,, 50	1-300
30-35 ,,	15	9	24	62	,, 40	1-250
35-40 ,,	22	9	31	68	,, 45	1-350
40-50 ,,	14	6	20	70	,, 55	1-320
50-60 ,,	11	6	17	64	,, 65	1-350
60-80 ,,	7	5	12	58	,, 20	3- 50

the age incidence (see the attached table). The disease was found to affect the sexes about equally and to be a little more prevalent in the fairly well-to-do than in the coolie class.

After doing more than 3,000 post-mortems on Cantonese, I am still unable to say whether O. sinensis ever produces disease in them, though I am inclined to think that in very old people the enlargement of the bile ducts may help in the production of gall-stones.

The Teeth in Inherited Syphilis. From an address on "Inherited Syphilis," by Clement Lucas, F.R.C.S., *Brit. Med. Journal*, 1st February, 1908.

The teeth Mr. J. Hutchinson described as so characteristic of the disease are the notched and narrowed incisors, especially the central incisors of the upper jaw. This defect is brought about by arrest in development of the central columella, of which each incisor has three. But I wish to draw special attention to the characteristic change brought about by the disease in the first molars, described by the late Mr. Henry Moon many years ago, since this change has been recently rediscovered both in America and on the continent. He figures and describes the syphilitic first molar as "reduced in size and dome-shaped through the dwarfing of the central tubercle of each cusp."

The change in the molar is of some clinical importance since occasionally it is characteristic when the incisors are normal.

Surgical Notes.

Under the charge of A. W. TUCKER, M.D.

Carl Beck (*American Medical Association Journal*, April 18, 1908) urges the use of the Roentgen ray in the treatment of all bone injuries. No bone injury should be treated without at least one Roentgen picture. If there is no displacement, manipulation must be avoided, and the part should be put up in a plaster-of-Pairs bandage. After two or three weeks the bandage is to be removed and massage begun. If there is displacement, replacement must be attempted at once, either on a translucent table under the control of the screen, or from the guidance of two skiagraphs taken in different positions. When reduction has been accomplished, plaster-of-Paris bandage should be applied, and then a Roentgen ray picture should be taken to ascertain if reduction is perfect or not. If not a new attempt at reduction should be made. While in the great majority of cases it is possible to reduce the worst fractures at an early stage, there are cases where, on account of the fragments being entangled from extensive splintering or other causes, it cannot be accomplished. Then the fragments must be exposed and trimmed until they can be brought into position. If necessary, mining should be done. The safest suture is aluminium bronze wire. Silver wire breaks too easily, hence the necessary force to hold the fragments together cannot be applied to it. All wire sutures should be removed in from four to six weeks, as they always causes more or less irritation.

Cunningham (*Amer. Med. Ass. Journal*, April, 18, 1908) describes an apparatus for giving heated nitrous oxide, oxygen and ether sequence in general anesthesia. By mixing the nitrous oxide with pure oxygen, the nitrous oxide anesthesia can be continued until the other narcosis is established, thereby doing away with the objectionable features of the induction period of ether anes-

thesia which tends to lessen the after-effects. By heating the vapours, the refrigeration of anesthesia is greatly reduced, thereby saving the body heat and lessening the shock. There is no rebreathing, which eliminates the ill-effects of decreased oxygenation, of increased amount of carbon dioxide and of other gases. It also saves about half of the ether.

A simple apparatus for giving either ether or chloroform in the form of heated vapour in the gwathmey mask, which is similar to the ordinary chloroform mask, except that the bottom of the frame is made of tube having small holes on the inside. By means of a rubber tube the mask is conuected to a bottle containing the ether or chloroform. The bottle is then connected to an ordinary cautery bulb. The container is placed in a hot water bath, the temperature of which is just under the boiling point of ether or chloroform.

Gynæcological Progress.

In the *Clinical Journal*, February 19th, 1908, there is an instructive and interesting article by Bland Sutton on the "Treatment of Injuries of the Uterus." They fall easily into four groups :—

1. *Gynæcological injuries.*—This group includes perforations by the uterine sound, dilators, curette, or the nozzle of a syringe, or a douche. In this group must be placed accidental introduction of some strong antiseptic solution into the peritoneal cavity.

2. *Obstetric injuries.*—This group comprises such accidents as rupture of the uterus, arising from the use of midwifery instruments, or the operation known as "turning." It will also include the so-called *spontaneous* rupture of the uterus due to violent contractions of the uterus in obstructed labour.

3. *Injuries to the pregnant uterus*, due to falls, kicks from man or other animals, horn rips of the uterus, bullet wounds, etc.

4. *Injuries to the gravid uterus* in the course of abdominal operations.

The simplest and certainly the commonest accident is perforation of the uterus with a sound, dilator, or curette. When the instruments are carefully sterilised and the uterine cavity free from pathogenic micro-organisms the passage of a sound through its wall is rarely attended with any untoward consequences. When the sound or the uterus, however, is septic, perforation of the organ has been followed by rapidly fatal peritonitis. A wound made with a dirty uterine sound may be as lethal as a snake bite. Injuries by dilators come more frequently under notice because they are more obvious at the time they are inflicted. When the dilator is small and clean, and there is no bleeding, the case may be left to itself. However occasionally very serious consequences follow simple perforations by dilators and curettes and this has induced Jarman (Gynæcological Tras., Philadelphia, 1905, vol. 30, p. 21) to urge that if in the course of dilatation or curettage a rupture or perforation of the uterine wall occur *it is better to perform coeliotomy* and assure oneself of the safety of the patient than to hope that no untoward result will ensue.

A careful study of the effects of forced dilatation of the unimpregnated uterus shows that if the dilatation is carried beyond No. 8. (Hegar's scale) some tearing of the lateral walls occurs, and often this tearing will exteud to and involve the serous membrane. Antiseptic douche afterwards will lead to serious trouble. This can be avoided if the practitioner will be content to mop out the uterine

cavity instead of uselessly deluging the endometrium with antiseptic lotion.

Cases have occurred in which nurses douching lying-in patients have unconsciously perforated the soft uterine wall with the nozzle of the syringe and delivered the solution into the peritoneal cavity.

One of the most serious complications of injury to the unimpregnated, as well as the gravid uterus, is extrusion or prolapse of the intestine.

Operators have recovered large pieces of the intestine under such circumstances under the impression they were dealing with the uterine contents, and have only discovered their mistake when too late. Under such circumstinces *coeliotomy must be performed* and any damage repaired immediately. Under some circumstances where the prolapse of the bowel through the uterine perforation is recognised immediatey it may be sufficient to put the gut back through the opening. In one such case the patient did well and had two subsequent pregnancies.

"The dexterous operator may use any instruments for which he has a preference; for him the art lies not in the instruments but in the hand."

There is another class of gynæcological operation in which the uterus runs great risk of rupture, namely in that known as *vaginal myomectomy*. In the effort to dilate the canal the dilator is pushed through the uterine wall. Vaginal hysterectomy is advisable in such cases.

Desperate measures have been adopted from time to time by women who wished to bring on miscarriage or abortion, and the result has been disastrous in the extreme. A gravid uterus in the later months of pregnancy is a large organ and may be severely injured by blows or kicks, or butts from animals, falls upon the belly or downstairs, or the woman may be run over. As a general rule it may be stated that the most satisfactory mode of treatment is *cœliotomy*; this permits a thorough examination of the organ and facilitates removal of the effused blood. In the late stages of pregnancy accidents of this kind entail cæsarian section.

Rupture of the uterus during labour.—This may be spontaneous, or may be due to the use of instruments, or may result from "turning". There are three methods of dealing with this condition.

1. Treat the patient conservatively, which means at the most packing the part with antiseptic gauze; this must be done lightly.
2. Performing cœliotomy and suturing up the rent in the uterus.
3. Hysterectomy preferably by the abdominal route, as this enables the peritoneal cavity to be cleared of clot.

Opinions differ as to which of these methods of treatment should be adopted. The only point on which there is any semblance of unity is this: In cases of complete rupture in which the fœtus and membranes are extruded from the uterus into the abdominal cavity, *cœliotomy* is indicated. When there is dangerous bleeding Klein advises immediate operation.

Injury to the gravid uterus in the course of abdominal operation.—When this results there are three courses open to the surgeon:—

1. Sew up the incision in the uterus.
2. Perform cæsarean section.
3. Subtotal hysterectomy.

A careful consideration of the reported cases indicates that the best results follow for the patient when the surgeon performs cæsarean section.

When the uterus has been wounded by a bullet, the best method of dealing with the case is undetermined. Cœliotomy with resection of injured bowel and hysterectomy seems to be indicated in most cases.

R. T. B.

Correspondence.

Toxic Gangrene.

DEAR DOCTOR: Enclosed please find specimens of a kind or kinds of weed that gives me a good deal of trouble every spring. By the natives it is widely used as a vegetable, and they report that about one out of every hundred that eats the smaller leaved variety is poisoned.

I only know that when poisoned the result is fearful. The face is swollen until the head appears perfectly round; the hands also are affected in the same way. There are no intestinal symptoms, no signs of poisoning until the swelling appears a day or more after the ingestion of the plant. They develop high fever and then a superficial gangrene limited strictly to the exposed part of the body. Under the clothing there is no œdema and no gangrene. This is one of its most striking points to me as I have noticed in one or two cases when the clothes had been worn open that the gangrene extended on the breast to the same extent. The pain accompanying the active inflammation is very great and nothing short of opium seems to relieve it. I have not been able to prevent the gangrene with its accompanying loss of skin and ultimate scarring. So far none that I know of have died. Have one in hospital now that will probably lose her finger despite the fact that radial pulse is good. The skin involvement is to about the same extent as a second degree burn.

I hope you may be able to give me light on the nature of the plant and as to what may be the cause of its erratic action. Any remedy that you may advise, I will gladly try to see if the long drawn out process can be cut short and the unfortunate victims spared some of the pains.

Yours very truly,

A. A. MCFADYEN.

Spreading Gangrene.

EDITOR OF JOURNAL.

DEAR SIR: Through the medium of the JOURNAL I am writing to make enquiries upon the subject of "Spreading Gangrene." During the last two years I have had three cases turn out rather badly, in spite of everything that could be done for them, and the effect has been to make me doubt the assertions of all three patients that the initial condition was caused by frostbite. Perhaps I had better outline the cases:—

No. 1. Admitted for gangrene of middle toe of left foot; toe was black and showed line of demarcation at the metacarpo-phalangeal joint. My assistant amputated at this point by an ordinary racket incision. Everything went well for three days, but at the first dressing on the fourth day the skin round the incision was black and blebs were beginning to form on the dorsum of the foot. The temperature went up to 102° Far. and the man was very uncomfortable. Each day the gangrene had increased, until at the end of a week all the foot below the ankle was black and gangrenous. The patient feeling that the "luck" was rather against him, at the advice of his friends, went home, and I have not heard about him since, as he lived some distance off in the country. Patient aged 43. No signs of any other diseased condition.

Case No. 2. Patient aged 45, male. Admitted for "frostbite;" the leg having, previous to admission, dropped off at the ankle from gangrene. The stump was sloughy, but the surrounding skin quite healthy. I amputated at seat of election, at junction of upper and middle third of leg, being anxious to give him enough

stump to wear an ordinary artificial "peg leg", which a local carpenter could make for him. The operation was without incident. The fifth day the dressing was changed, and both flaps were found black and gangrenous. At the operation the flaps were cut specially long, and sufficient drainage was allowed. After many days, when the tissues had all sloughed clean. I again amputated, not at the knee joint but just below it, only to be followed by a further sloughing of the flaps and some of the muscular tissue. After some weeks, when the sloughs had separated, I was enabled by strapping to get about one-half the amputation sight closed in, but at the suggestion of further operative treatment to close the remainder he took himself home to the country and has not been heard of.

Case No. 3. Male, aged 28. Admitted for "frostbite" gangrene of left "little toe." At the time of admission the toe was black and hard; the line of demarcation being at the metatarso phalangeal joint. The second and third toes had a patch of black at the tip. The little toe was amputated at the joint mentioned by a racket incision, but I noticed at the time that although the tissues appeared quite healthy there was not enough blood to stain the cotton swab. The incision was only partly closed by sutures. On the fourth day, when the dressing was changed, there had been enough bleeding to stain the dressings, and the edges of the wound were red and inflamed; the two stitches were removed and a dry antiseptic pad applied. The same day the temperature began to rise and the patient complained of considerable pain. Dressed next day and found about two inches of black gangrene on the dorsum and outer side. Temperature 103.6 Day by day the gangrene spread, until the whole of the foot, to about an inch above the ankle joint, became black. The foot and leg were well swathed in cotton wool and covered with dry antiseptic powder (Ferris's); and with tonics, stimulants and good feeding the temperature began to fall to about 100, and I expected the gangrene would stop at the point mentioned. I was disappointed; the temperature ran up again to 104 with only slight morning falls, and the gangrene began to travel up the leg. In the meantime the patient was in a bad way, with a slight amount of delirium and rough brown tongue, but pulse kept good. Urine and faeces were passed in bed. Sloughing patches found over the sacrum, and a secondary infection (pyæmic) started in the middle joint of the right hand third finger. As it was evident he would succumb, much against my will, his friends removed him and commenced to take him 400 *li* to his home. Have not heard the consequences.

Now what is this? Ordinary gangrene, or something special? Did I hear some one say carbolic? Well perhaps! The second case never said carbolic, for I was able to operate on a surface easily cleaned, and so the dressings were sterilized, and nothing but sterilized water used. The two "toe cases" had a solution of carbolic acid 1-60 used at the operation and sterilized gauze dressings. I cannot admit carbolic as the cause; it was Calvert's pure, and certainly not stronger than stated and the condition commenced immediately after the operation; it had not been constantly applied over a large surface. Further, in the second case the amputation was below the site when a flap operation can become gangrenous, due to cutting off the blood supply coming from the recurrent tibial.

Was it Reynaud's disease? Certainly in the last case the foot was cold and probably underneath the dirt was whiter than usual, but by the time it was scrubbed clean for operation the stimulus had made it appear normal, except that there was no bleeding when cut. There was no previous history to be obtained as to suffering excessively with cold feet. There were no mental or nervous symptoms of Reynaud's, and certainly never any hæmoglobinuria. I've seen a fair amount of frost bite, on the Labrador Coast, but not of the kind shown in the first and third cases, and further, although the patients attributed the condition to frost, I don't think the weather was sufficiently severe at the time to produce it.

If it is Reynaud's disease, is there any objection to amputation? And

are these cases likely to lead to spreading gangrene, and are there special precautions to be taken at the time of operation ?

Finally, for I don't want to make this note long with argument or debate, is it possible that the condition may he due to "food ?" All three patients were country labourers. I have not seen ergot gangrene, but these cases certainly had none of the nerve symptoms of ergot poisoning in the spasmodic form. Pellagia and Lathyrism are not characterized by gangrene. I hope some of your readers, who have been in China, as many years as I have months, may give me the benefit of their experience.

Believe me, yours sincerely,

W. H. G. GRAHAM ASPLAND.

PEKING, May 4th.

EDITORS OF JOURNAL.

DEAR SIRS: Will you kindly tell me if a name has been settled for a disease which we see so much of here in North Chiua and further inform me of any treatise on the subject? The facts as I see them here are as follows :—

Another Nut to Crack.

1. Always in children; youngest eighteen months, oldest ten years.

2. Most profound anæmia—of the chlorotic type—mucous membranes almost yellow.

3. Enlargement of spleen down to umbilicus and in severe cases almost to pelvis.

4. Diarrhœa and clay-coloured stools, irregular. Some have 12-15 motions a day and others obstinately constipated.

5. In the late stages always some necrosis of upper or lower jaw. The mildest cases have a black necrotic patch on the gums over the upper central incisors, gradually spreading until the teeth drop out. The worst cases have had necrosis of upper jaw on both sides, and nose and in one case everything was gone to the orbital margins. In another case the whole of the left lower jaw was removed hy daily syringing and dressing.

6. The uselessness (apparently) of my treatment.

Some cases improve slightly if seen before the stage of necrosis, and one case I thought after three or four months had been cured, hut failed in the end. I give a "shot gun" prescription of quinine, hydrarg creta and sacharated iron.

I see from 10-20 cases a year. I have many suspicious about the disease, but want the opinions of older men than myself who have more time to devote to the study of parasites, and my eagerness is due to my complete failure in treatment.

Hoping for replies.

Yours sincerely,

W. H. G. GRAHAM ASPLAND.

PEKING, May 18th.

DEAR DR. JEFFERYS: Yours of the 9th came to hand to-day. "GIVE A CALF ENOUGH ROPE AND HE'LL HANG HIMSELF." You are tempting this calf with a "powerful long" rope, Mr. Editor. It is as bad as treating disease by mail or marrying through a matrimonial agency.

Still Unhung.

I took a fairly long shot the other time and hit the mark, but it might be hard on my reputation if I took three more in print and didn't hit a single one.

I will take one or two tries (strictly in private till I look at the target). The photos. you send of No. 1 resemble pollen grains more than anything of which I can think. When of the form resembling that in the picture, the center is yellowish and often contains oil globules (having a high refractive index). At the ends are small air bladders which enable the grains to be carried by the wind in wind

ertilized plants, e.g., the pines. Sometimes the air-sacs have markings. In case there are none, the air-sacs often suggest "an expansion of the exine" of a spore, which in a sense they are.

I am not at all sure what No. 2 is, not even enough to make a guess. Perhaps if I saw the "critter" I might be able to identify it.

No. 3 is possibly a spore of one of the "smuts" (Ustilagineæ), but of that I am by no means certain.

I wish I could give you some really valuable advice as to books. In the line of Vegetable Histology, I think Vine's Students' Text Book of Botany is as good as any of which I know. As to a Systematic and Descriptive Book on Fungi, I am at a loss to know what to suggest. I work entirely from "keys" and descriptions compiled from government reports and State Experiment Station Bulletins, etc. That means that the sources are scattered all over botanical literature. There must be some book on this subject. The only one of which I know was published in 1886, so that it may be quite out of date. It is de Bary's Comparative Morphology and Biology of Fungi, Mycetozoa and Bacteria. Moreover it is expensive, £1.2.6. It is published by the Clarendon Press, Oxford. I doubt whether it is worth the cost now. There certainly must be something better by this time. As I wrote before it is now ten years since I was actively interested in Fungi, and I have not had the opportunity to keep abreast of the times. If you are still interested, and will let me kuow, I shall be glad to write to my former teacher, of whom I spoke in my last letter and ask him for a list of up-to-date books ou these subjects. The Presbyterian Press must have catalogues of all the scientific books published, but that gives no way of picking out the best.

If I can be of further service, I shall be glad to do so far as my limited time will allow.

Cordially yours,

CHARLES W. YOUNG.

UNION MEDICAL COLLEGE,
PEKING, April 17th.

EDITOR OF JOURNAL.

SIR: I have read with much interest Dr. Cormack's article on the "Opsonic Index of the Blood." Is there not, however, a possibility that this "latest method of diagnosis and treatment of disease" may prove to be of academic interest rather than of practical use? There lies before me as I write an article by Dr. T. J. Horder, of London, in the *St. Bartholomew's Hospital Journal* which is eminently practical. He points out therein how much the personal equation of the operator comes in and what large chances of error also tend to vitiate the result.

A Healthy Doubt.

The highly fallible conditions underlying the technique of "opsonic index" determinations must strike all careful observers. I do not speak of the operator but of the operation itself. The bacterial suspension: the difficulties in obtaining a uniform emulsion can only be realised by those who choose to be fastidious in this matter. Yet the aggravating clumps of tubercle bacilli seem to cause no anxiety as to the count in some folks' minds. The "opsonic index" (to two places of decimals) of a patient's serum to a strain of conglomerate streptococcus is by some rattled off with ease and the result taken as the guide in treatment without hesitation. The serum: twenty-four hours coming through the post and waiting at this end until things are ready for the estimation. The leucocytes: jostled, washed, and rinsed; kept for some hours, it may be, at all sorts of temperatures, except that at which they are accustomed to live. Yet we are asked to believe that all these things are nicely re-adjusted by fifteen minutes' admixture

in a glass pipette in the warm incubator, and that what goes on there is what would go on in the undisturbed smoothness and warmth of a lymphatic chaunel. The slide: shall we count the clumped cells or shall we not (the custom is to omit them), and who shall decide how many cells lying together constitute a "clump?" Shall fragments of bacilli be counted as bacilli or omitted altogether? What of the cocci that do not stain properly? Are all the leucocytes that contain no bacteria to be counted, and what is the maximum bacterial content that shall determine the inclusion of a cell in the count? All these things must be settled and a definite set of conventions established, or every man becomes a law unto himself, and the results of no two workers can possibly have the same meaning. These difficulties are not settled, as it is so often asserted that they are settled, by the fact that with each worker the normal slide receives the same treatment in all respects as the slide derived from the patient.

Then consider a totally different fallacy —the personal equation of the operator. I will confess that it was my inability to obtain constancy of results in respect of my own preparations that first shook my faith in the "opsonic index". Some two years ago Dr. Andrewes and I made some observations upon this question. We set about an estimation of the "opsonic index," using the same slides and adopting the same conventions in counting. Our results, when only 50 cells were counted, were widely different. We found, however, as might be expected, that the more cells we counted the closer approximation our results showed. But with 100 cells there was still a very appreciable margin of difference. When it is remembered that the opsonist school claims that the diagnosis of the nature of a bacterial infection can unquestionably be made by a difference of less than 0·1 in the index to a particular micro-organism, we see how little is allowed for questions of personal equation.

But if you are concerned to know to what a high degree these fallacies may rise, and how insuperable they are, let me refer you to a paper recently published by Fitzgerald, Whiteman, and Strangeways, in *The Bulletin of the Committee for the Study of Special Diseases* (vol. i, No. 8, August, 1907). These authors give abundant evidence for regarding the margin of error in "opsonic counts" as great enough to destroy all value claimed for them. They show that, if several consecutive sets of 50 cells be counted in a slide from a tubercular patient, and in one from a normal person, for every result in the normal slide a corresponding one could be found in the tubercular slide, or one as near to it as is allowed by opsonists to be within the limits of variation in the normal. It therefore follows that, as it is a mere chance which set of 50 cells will be counted in each of two films that are being compared, a high normal count may occur with a low tubercular count, or *vice versâ*, or both counts may yield the same results. The counts cannot therefore give reliable evideuce of the presence of a "positive" or "negative phase". These authors show that enormous variations may occur in the results obtaiued from using different capsules of blood taken at the same time, and also in the results of two workers using the same capsule. Cogent reasons are given for regarding any count of less than 1,000 cells as liable to give a false result! Truly, he who would be an opsonist must scorn delights and live laborious days! If the very thorough investigation undertaken by these observers finds confirmation elsewhere by equally competent bacteriologists and hæmatologists (the addition of a competent mathematician would, perhaps, be an advantage), "opsonic index" estimations, as they are at present determined, must be regarded as au encumbrance rather than an assistance in the treatment of disease.

Dr. Horder uses bacterial vaccines and does not write in any doubtful way about their utility. It is the opsonic index as a guide to treatment which he questions, and I must say that the objections seem to me very real ones. Treatment that involves as much personal equation as this seems to do, must of necessity differ little from empiricism.

I am,

Yours truly,

J. PRESTON MAXWELL.

YUNGCHUN, April 13th.

From the Far West.

DEAR DOCTOR: Our great West China Missionary Conference is over. Nearly 200 missionaries registered. The conference was very helpful indeed. It adopted as its ideal "One Protestant Christian Church for West China", and

took several very practical steps toward the realization of this ideal. The spirit of unity and fraternity was splendid.

We secured the appointment of a large standing committee to bring the evils of the cigarette habit to the attention of the local and central governments and of the British and American goverunents.

Very sincerely yours,

CHAS. W. SERVICE.

KIATING, WEST CHINA, February 5th.

Dr. Cox Back Again.

DEAR DOCTOR: We returned to China from furlough last month and have resumed work at Chiukiang. Dr. and Mrs. Shackleton are staying on here and are taking up the work of the Chinese hospital, while we look after our little Home of Rest and also the station work. I am also doing a little dentistry for our missionaries.

We spent our furlough in South India, which is our home. I was much interested in revisiting the work of the Neyoor medical mission in connection with the London Missionary Society. It is said to be the largest medical mission work in the world by Prof. Currie Martin. It has about a dozen branch dispensaries scattered all over South Travancore, and last year the total number of patients seen amounted to 79,805. These branch dispensaries are in charge of native men who have been fully trained at the Neyoor medical school. They are earnest medical evangelists and do good reliable work.

I also spent a few weeks at the Salvation Army hospital at Nagercoil, under Dr. Percy Turner's care. During his absence on furlough Dr. Mumford is in charge. They make the work self-supporting by charging for all the medicines given, both to dispensary and in-patients. Also by having private wards for paying in-patients. Each ward has a kitchen attached. These are used by caste people. They use the metric system throughout and have a qualified chemist, who takes entire charge of the drug department. In this they use the standardised fluid extracts and glycerine preparations. Dr. Turner is an eye specialist, and does a good deal of refraction work, and also supplies the lenses.

All the hospital buildings are in the ground floor spread over a large area.

The out-patient records are kept in large books, and each patient has a number. A separate number for men and women. These numbers have been going on for eight years or so, ever since the hospital has been started. I think they get a fresh number for a fresh disease, but I am not sure.

Well, we are glad to get back again and to work in Chinkiang. May this term of service be more fruitful than before in the Master's work.

Believe me, yours sincerely,

GEO. A. COX.

CHINKIANG, May 6th.

More Gangrene from Frost.

DEAR DOCTOR: You may think it worth while to put in the JOURNAL notes about a woman who attended the out-patient department here.

On the 28th May, about 7 p.m., we had a fall of hailstones about the size of a walnut. The sky had been clouded and looked like an ordinary storm of thunder and rain; but a strong north wind came, blowing lots of dust, then thunder and lightning, and there was a noise like bullets falling on the roof. I picked a few hailstones up; they were like small blocks of ice, and putting three or four in a

glass of water it soon made a cool drink.

The next morning a woman came to the dispensary with very swollen face and hands, which she said were the result of being out in a wheat field when the hail and wind came. The following day she seemed worse, the cotton wool and bandages she had taken off her hands, her eyes could not be opened, her throat seemed affected, her lips were greatly swollen and her hands cold and blistered. I gave her digitalis and strychnine, and on Monday she reappeared much better; the eyes were open and the face much less swollen, but the cheeks very red and the capillaries dilated.

The blisters on hands had broken and clear fluid was exuding, but the tips of the fingers were black, and though she could move and said she had sensation in them, they looked almost gangrenous. Was it a case of frost bite in summer or could the lightning have in any way caused her trouble.

Only the face and hands, the parts exposed, being affected, would point to the hail as the cause; would it not?

Again thanking you with kind regards,

I remain sincerely yours,

W. SHACKLETON.

CHINKIANG, June 2nd.

Mucilag. Mosquit.

DEAR DR. JEFFERYS: Thanks for the reports on specimens received yesterday. I am trying to learn something about bugs in general, malaria especially. I don't get as clearly defined corpuscles using B. W. and Co.'s "soloid" Romanowsky stain (using Merck's alcohol) as I do using Ehrlich's triacid. Is the fault with the stain or me?

I have accidentally done a rather interesting experiment. Last summer (?) I made up some mucilage of acacia. Had not used it for a long time, when one day, during the winter, found there were twenty (or thereabouts) larvæ in the solution; stoppered the bottle with oakum—last week they began to change to mosquitoes; clearly a case of hibernation of larvæ. (Giles quotes Celli on this point I believe.) They are *not anopheles*.

Yours sincerely,

R. T. SHIELDS.

DONGSHANG, May 27th.

A Central Supply Bureau.

To the Editor of

"THE CHINA MEDICAL JOURNAL."

MY DEAR DOCTOR: Could we have your assistance in a rather important inves-tigation we are conducting concerning the possibility of decreased expense and increased convenience in the matter of securing drugs and other supplies for mission hospitals? For some time past a number of business men have felt that there might be such a thing as increased economy and efficiency in missionary administration if there could be established a central bureau, under the official sanction and supervision of the missionary boards, which bureau would serve as a clearing house for all missionary societies in many forms of administrative work.

One of the departments of such a bureau would be the purchase and supply department, aiming to assist the missionaries in getting such supplies as they need on as advantageous terms as possible, and one of the special phases of the supply department work, in turn, would be to assist in securing drugs

and supplies for missionary hospitals as advantageously as possible. It is felt that some gain might be made, first, by purchase of drugs and supplies in wholesale quantities in behalf of all the missionary hospitals of the world; and, second, that there might be an additional gain by securing such supplies from a sympathetic, missionary spirited Christian manufacturer, who might be willing to furnish the supplies at approximately manufacturer's cost price.

In order to enable us to judge whether or not there is any substantial gain to be effected by any such co-operative bureau, would you be willing to write on the margin of Schieffelin and Company's catalogue, which I am sending you under separate cover, the price which you are now paying f. o. b. (London, New York or Berlin, as the case may be) for the staple drugs or supplies of which you use the largest quantities? Second, we do not necessarily ask for the name of the firm which makes you the price quoted on the margin, but we would appreciate having you indicate the country where the price is secured, say, A for America, E for England, G for Germany, J for Japan; and if, perchance, the freight is also prepaid at the price quoted, add the letters Frt; otherwise we will understand that the price of transportation is added to the figure quoted. Third, will you kindly indicate the total amount of supplies that you purchase from various countries in the course of the year, and also, if convenient, the average size of your orders?

I need not assure you that we will apreciate your personal judgment concerning the feasibility of the plan suggested and any other facts that you think will be of assistance to those who are giving the question their careful consideration.

Sincerely yours,

C. V. VICKREY, *Secretary.*

Young People's Missionary Movement (Incorporated.)

NEW YORK, April 23rd, 1908.

Personal Record.

BIRTH.

AT Kuling, on May 30th, to Dr. and Mrs. GEORGE A. HUNTLEY, of Hanyang, a son (Wilfred Eliot).

MARRIAGE.

AT Shanghai, 24th June, Dr. JOHN C. CARR to Miss DOROTHY HUNNYBUN, C. I. M.

DEPARTURES.

31st May, Dr. J. R. WILKINSON, S. P. M.; Dr. I. M. HOTVEDT, H. S. M., for U. S.

8th June, Dr. J. A. BEAM, R. C. U. S. M.

13th June, Dr. and Mrs. J. MENZIES, C. P. M., for Canada.

20th June, Dr. and Mrs. CHAS. LYON, A. P. M.; Dr. and Mrs. JAS. BUTCHART, F. C. M.; Dr. A. Z. HALL, A. B. M. U., all for U. S. A.

A CASE OF CHRONIC SKIN DISEASE.

See Page 311.

The
China Medical Journal.

VOL. XXII. SEPTEMBER, 1908. No. 5.

Original Communications.

[All copy must be in the hands of the Editors one month before date of publication to insure appearance in the following number. The editors cannot undertake to return manuscripts which are sent to them. A complimentary edition of a dozen reprints of his article will be furnished each contributor. Any number of reprints may be had at reasonable rates if a *written* order for the same accompany the paper.]

CHRONIC INTUSSUSCEPTION.

WITH NOTES ON SEVEN CASES.

By JAMES L. MAXWELL, M.D., Tainan, Formosa.

In a former issue of the CHINA MEDICAL JOURNAL (November, 1907), I described three cases of this disease. Since that time I have operated on two further cases and am able to give notes of two cases more as yet unpublished. For the notes and permission to publish these latter two I have to thank Dr. W. H. Jefferys, of Shanghai, and Dr. D. Landsborough, of Chianhoa, Formosa.

The seven cases given in brief are as follows:—

1. Tsan Cheug, male, aged 28, admitted Tainan hospital 6th June, 1906, stating that he was suffering from dysentery. Symptoms dysenteric with colicky pains in right hypochondrium; no tumor felt. Operation—incision in right linea semilunaris. Large intussusception discovered. Almost the whole of it irreducible. Excision of whole mass. End to end union with Murphy's button. Death from shock a few hours later.

2. Under care of Dr. Landsborough. Chinese girl, aged 12. Symptoms about two months, much emaciation. Sausage-shaped lump felt in position of transverse colon. Paroxysmal pains along course of ascending and transverse colon; during the attacks of pain the swelling became more tense. Laparotomy—intussusception reducible with difficulty, leaving a lump—probably tuberculous—in the cæcum. Excision of cæcum. Implantation of ileum in colon with Murphy's button, leaving the open end of the colon in the wound. Death from peritonitis on fourth day.

3. Li Tang-tek, male, aged 56, admitted to Tainan hospital 12th November, 1906, complaining of dysenteric symptoms. *One month's history.*—No tumor to be felt, but a diagnosis of the case was made from the very marked attacks of colicky pain running along course of ascending and transverse colon. *Operation*—Incision along right semilunar line. Intussusception reduced as far as possible and a lateral anastomosis of the large and small bowel performed with a Murphy's button. Death from exhaustion on the fourth day.

4. Kho Lan-tit, male, aged 19, admitted to Tainan hospital on 9th March, 1907, stating that he was suffering from dysentery. History dated from February 8th when he was struck in the abdomen. Sausage-shaped tumor in position of transverse colon. Very severe paroxysmal pain along position of ascending and transverse colon. *Operation.*—Lateral anastomosis, after reducing the tumor as far as possible between large and small bowel by suture guarded by omental graft. Bowels opened by enema on fifth day. Convalescence uneventful.

5. Kho Chhat, male, aged 39, admitted to Tainan hospital on 5th November, 1907, complaining of dysenteric symptoms and abdominal pain. Four months history of pain and passage of bloody mucus. Patient was an emaciated looking man without cough or other signs of tubercle. On examination a sausage-shaped mass was seen in position of transverse colon. Colicky attacks of pain commencing at the position of the cæcum and running up the course of the ascending colon and along the transverse colon. During the attacks of pain the tumor became larger and harder. *Operation.*—Laparotomy revealing an intussusception which was reduced without great difficulty, but left a mass in the cæcum, which was covered on the outside by what appeared to be miliary tubercles. Lateral anastomosis by suture of bowel on either side of cæcum, guarded by omental graft. Bowels opened by castor oil on the third day. Convalescence uneventful.

6. Unfortunately the notes of this case have been mislaid, and I can only give general details. Chinese boy, aged about 13, admitted to Tainan hospital in December, 1907, complaining of obstruction of the bowels with dysenteric symptoms. There appears to have been chronic obstruction for some months, but symptoms of a more acute nature had been present for two weeks. These consisted of almost complete obstruction relieved about every four or five days by the passage of flatus with blood and mucus after rectal injections. A tumor could be felt in position of transverse colon and severe attacks of colicky pain were felt along the position of ascending and transverse colon. *Operation.*—Laparotomy. Intussusception reduced with great

difficulty, leaving a mass in the cæcum, which was covered on the outside by what appeared to be miliary tubercles. Lateral anastomosis by suture of bowel on either side of cæcum guarded by an omental graft. Convalescence was rather protracted but otherwise uneventful.

7. Under the care of Dr. W. H. Jefferys. St. Luke's Hospital, Shaughai. Male, aged 42. Four years ago tried to stop opium, two weeks later had pain in right abdomen with swelling and fever. The pain radiated to penis; small mucous stools. Swelling and rigidity since that time, also frequent attacks of pain but not so severe as at first. A Chinese doctor stuck needles into the swelling every other day for a long time. On admission a swelling could be felt, but owing to the rigidity of the abdominal muscles its shape could not be determined. The case was sent in as one of appendicitis and was operated on as such; the appendix was found brittle and perforated and was removed. A fæcal fistula formed which persisted, soon doing all the work while there was no action through the rectum. A further operation was then performed, at which it was discovered that an intussusception of the ileum into the colon existed, about eight inches in length and absolutely irreducible. A lateral anastomosis of the small and large bowel was therefore performed with a Murphy's button. The button appeared on the tenth day and was removed from the rectum. The man, who was terribly cachectic, then improved rapidly and the fistula is gradually closing, though an operation to hasten this did not prove successful.

I shall close this paper with a few remarks about the diagnosis, pathology and treatment of this condition.

DIAGNOSIS.—The cardinal symptoms of intussusception are said to be:—Tumor, pain, obstruction and the passage of bloody mucus per anum. *Tumor.*—A swelling was palpable in five out of the seven cases. It was diagnostic in four. In the seventh case, though present, it gave no assistance in determining the nature of the case owing to the rigidity of the abdominal walls. In case No. 1, after repeated examination, no tumor could be felt, and this is still more striking in case No. 3, when I was able from other signs to make a diagnosis of the condition before operating, despite the absence of a swelling. The presence of a tumor must not therefore be too strongly relied on for the diagnosis of this condition, though when easily felt the outline of the swelling is very typical. *Pain.*—I am coming to rely more and more on the nature of the pain in diagnosing these cases. Pain has been a very marked symptom in all severe cases. In six of these the pain has been absolutely

typical and I have no note of the nature of the pain in case No. 7. In cases 1 to 6 the pain was of a paroxysmal character, and if asked to point out the position of the pain during a spasm the patient would run his hand from the right iliac fossa up the course of the ascending colon and then across the abdomen along the position of the transverse colon. I incline to lay great stress on the nature of the pain in coming to a diagnosis. *Obstruction* is not a sign on which any great weight can be laid. In case No. 1 the abdomen was markedly retracted, and in no case was there any very noticeable distension of the abdomen, even though in one case, No. 6, partial obstruction was complained of. *Passage of bloody mucus.*—Chronic dysentery is so common out here that it is very difficult to estimate this symptom at its right value. In countries where dysentery is rare it might be very valuable. In my first case this symptom with the presence in the stools of amœba coli actually led me astray.

PATHOLOGY.—The commonest form of intussusception is that belonging to the ileo-colic variety. All seven of the cases here reported, were of this nature. The cause of intussusception, speaking generally, is very doubtful, though in infants it is commonly associated with chronic enteritis. There seems no reason to suppose that such was the cause in any of the cases here mentioned. Of case 3 we have no clue to the cause, but in referring to my fuller notes of the patient's history I find that there was no prodromal stage of diarrhœa. Cases 1, 2, 5, 6, 7 showed the presence of a tumor or thickening in the cæcum. The history of case 4 is remarkable, as the pathological condition seems to have followed directly on a blow in the right iliac fossa, followed a little later by hæmorrhage from the bowel. In this case it is at least probable that the cæcum was damaged and that a hæmatoma may have formed in its wall. It must be quite evident that if the lumen of the cæcum is greatly narrowed the pressure from above would tend greatly to facilitate the formation of an intussusception at a point in the bowel already prone to this pathological condition. If we are right in thus accounting for this condition it is plain that any form of narrowing of the gut at this particular spot will tend to the production of intussusception. We are, however, inclined particularly to blame the tubercle bacillus as being the most probable cause of such tumors. In cases 5 and 6, after reduction, the peritoneal surface of the mass in the gut appeared to be covered by miliary tubercles, a condition confirmed by Dr. Landsborough, who assisted me in these two cases and by another medical man who was present in case 5.

In case 2 Dr. Landsborough, who operated, believed the lump to be tuberculous. In case 1 I examined a portion of the excised

cæcum microscopically and the thickening appeared to me to be of that nature, though the tubercles were not quite typical.

We have therefore a considerable amount of evidence in four out of the seven cases in favour of the swelling being due to a local tuberculosis; and it must be further remembered that the cæcum is a spot in the bowel rather prone to the attack of the tubercle bacillus.

TREATMENT.—That operative treatment is essential is self-evident, and only two forms of such treatment need be discussed—excision and lateral anastomosis. Excision appears to be the treatment recommended by the ordinary text-books and works on surgery—at least by all that I have been able to refer to. All the books acknowledge that the mortality of this form of operation in these cases is very high. Two of the seven cases here reported were operated on by excision, and both cases died.

We cannot ourselves understand why no reference seems to be made in text-books to lateral anastomosis as the treatment for this condition. We here record five cases of operation by this method with only one death. That death was on the case of an old man with little or no recuperative power, and we cannot but believe that he too might have recovered but for the total absence of nursing facilities in our hospital. The operation is simple, speedy, and unattended by shock, because there need be no great exposure of the abdominal contents. I prefer the operation by simple suture with an omental graft as described in my article in the November, 1907, issue of the JOURNAL. One objection may be raised to this form of treatment, viz., that the diseased mass—possibly tuberculous—is left in situ. Time must show whether this is really a serious objection or not. I believe that it will not prove to be so. Tuberculous disease, when given rest, has a very marked tendency towards spontaneous recovery. The cæcum is, after this operation, placed in a condition of absolute rest, and I believe that no further trouble will occur even though a tuberculous mass be left behind in it.

TRAUMATIC DIFFUSED ANEURYSM.

By CECIL J. DAVENPORT, F.R.C.S., Shanghai.

Patient, aged 23, admitted into Shantung Road Hospital on 2nd December, 1907.

History.—Began by aching in left knee three months ago after a wrench in walking. Swelling behind the knee gradually increasing with increasing pain, and some fever followed. The swelling broke of itself some two or three weeks ago on the inner side of popliteal

space. Needled by a native doctor a week previously. Only blood came away.

Condition.—A thin, sallow, anæmic man, addicted to opium. Left foot and leg much swollen and softly œdematous, not blue nor cold, no ankle pulse.

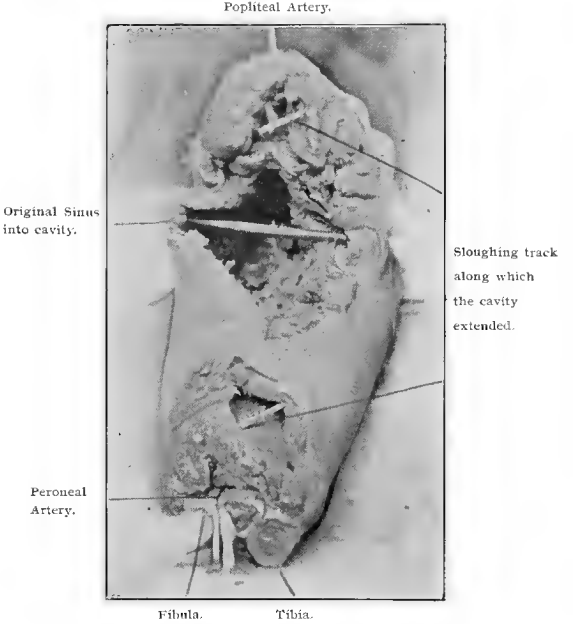
The left knee semi-plexed. Large elastic swelling occupying the popliteal space. Fluctuation obtainable. From the sinus on the inner side fœtid decomposing blood coming away. Probe entered sinus directly to the back of the joint some three or four inches from surface—thick, dark, foul, bloody discharge coming away. Temperature 99.4°. Pulse 128, feeble.

Patient was fed up and watched for a few days. On one occasion the temperature ran up to 102.6°. Pulse ranged from 100 to 128. Meanwhile the tension of the tumor increased, its fœtid condition continued, the sinus opening enlarged and free discharge of clots and dark, smelling blood came away.

December 8th.—Thigh amputated in the upper third. But even here the posterior incision was not free of the disease. As the photograph shows, the disorganized and suppurating clot had traveled up and down in the muscular planes from below the middle of the calf to as high as the upper third of the thigh. The muscles adjoining were infiltrated and looked very unhealthy. The upper part of the track, which could not be removed, was swabbed with pure carbolic after scraping away as much of the diseased tissue, as was possible. The patient survived the operation eight days, and then went home to die. Sloughing occurred in the stump, though he had no rise of temperature. Hiccough set in, and the disease readily overcame what little power of resistance he possessed.

The specimen.—A large cavity containing two handsfull of blood clot filled the popliteal space; the clot on the deeper aspect being somewhat organised. The knee joint was opened (we had thought it was free) and the popliteal surface of the femur somewhat eroded.

No blood vessel was traced as being open to the cavity. The main vessels appeared pushed to the outer side of the cavity and obliterated. As stated above the cavity had extended along the fascial planes between the muscles of the thigh and calf, containing septic breaking down clot and having sloughy, infiltrated walls; the infiltration extending into the surrounding muscles, almost giving the appearance of a new growth.



DIFFUSE POPLITEAL ANEURYSM.

Punctured Abdominal Wound Closed by Mesentery.

Any treatment other than amputation would have been futile, and only amputation through the hip joint would have been free of the disease. This would probably have killed him by shock.

The photograph shows the large ragged cavity with the original sinus-opening to the left. A horizontal match props open the extension of the cavity upwards and downwards along the fascial planes. The perpendicular matches are in the large arteries.

PUNCTURED ABDOMINAL WOUND CLOSED BY MESENTRY.

By W. E. Plummer, M.R.C.S., L.R.C.P., Wenchow.

The patient was a man aged 56.

History.—Ten days previously he was stabbed in the abdomen, after which the sausage-like swelling shown in the illustration gradually formed.

On admission the man's general condition was apparently normal. The wound from which the mass protruded was two inches below the ensiform cartilage and one inch to the left side. The swelling was covered with granulation tissue and it was solid and free from pain even when handled.

The abdomen was pliable and the patient quite comfortable.

Treatment.—The base of the protrusion was ligatured and two or three days later the swelling was cut off.

In an interesting paper on "Tubercular Troubles in the Abdomen" (which I read some time since and am now unable to find) the writer said he had often found the mesentry wrapped round a focus of infection shutting it off from the rest of the abdominal cavity; he also gave examples of other causes of inflammation in which the mesentry had found its way to the diseased area as if having an innate power of knowing where its services were wanted. We are familiar with the way in which this membrane will fill a hernial cavity and how the surgeon will use it to wrap round and strengthen his internal anastomoses; this case is another instance of its protecting power.

SOME POISONING CASES.

By J. PRESTON MAXWELL, M.B., F.R.C.S., Engchun.

I. *Arsenic.*—A China woman, aged 25, had a serious quarrel with her mother-in-law. It was a feast day and she had just partaken of a huge meal of pork, rice, and vegetables. About an hour afterwards she swallowed approximately half an ounce of crude arsenic, used in the fields for killing worms. Three hours after, having confessed what she had done, the case came under my care. She was intensely collapsed, with a small feeble pulse and semi-comatose. No vomiting or purging had occurred. She was treated with the stomach tube, and the whole of the stomach contents removed. Strychnine was given hypodermically and ferric oxide left on the stomach. Under this treatment with active stimulation, she slowly became better and complained a little of stomach ache. Next day she was well and no ill consequences followed.

There is no doubt that the huge meal she had taken saved her, and the arsenic having been swallowed with water in a solid form also contributed to this end.

II. *Carbolic Acid.*—A European medical man, aged 38, who suffered from phthisis, and had also tubercular ulceration of the large bowel, was being treated by daily inunction of guiacol and olive oil.

On the day in question he had already been rubbed in with one and a half drachms of guiacol. To relieve the bowel symptoms an enema of two pints of hot water, containing two drachms of pure carbolic acid, was administered. He had previously had enemata of this nature without any ill results.

Two minutes after receiving the enema he suddenly sat up, told his wife to fetch the doctor, and fell back insensible. Ten minutes after he was still quite unconscious with movements of the eyes, pupils contracted, face pale and skin moist. The pulse was poor, but not very rapid.

External warmth was employed, and he gradually recovered, passing through a stage of delirium and then a stage of confusion with hallucinations. After about two hours he was himself again, but very much shaken by the experience. The enema was returned immediately after its administration. There is little doubt that in this case the fact that guiacol was being rubbed in daily assisted in producing the poisonous effects, and the fact that the enema was returned at once assisted in limiting the action of the drug. It is difficult to say what constitutes

poisoning by carbolic acid. The writer's practice at the present time is, in cases of plague, to give twenty minims of the pure acid diluted with three ounces of fresh rice water every two hours till the urine becomes dark on standing. The dose is suspended till the urine clears, and then repeated every four hours till the case is out of danger. Even with these huge doses none of the serious symptoms of carbolic acid poisoning have been observed.

III. *Cannabis Indica.*—The same patient referred to in the paragraph which deals with carbolic acid on another occasion took thirty minims of B. P. tinctura cannabis indica.

Shortly afterwards he sent for help.

He was lying on the bed with loss of sensation as far as the upper part of the thighs, rendering walking almost impossible. The fingers and hands were also slightly affected. He was excited but quite rational and complained of the feeling of weight in the affected limbs. The heart's action was but little affected, the pulse rate increased. Hot coffee was administered, and in an hour or so the symptoms passed slowly away.

IV. *Cocaine.*—A woman, aged 45, was prepared for cataract operation by the instilling into the conjunctival sac of a solution of cocaine 10 per cent. Perhaps four to five drops of this solution was used. She complained of a little dryness at the back of the throat, but the operation (simple extraction) went off without a hitch.

Half an hour after she was seized with violent headache and intense vomiting, which passed off after about three hours. The eye did well, and there was no prolapse of the iris. Eserine had been instilled after the extraction.

Ten days later the other eye was operated on for the same affection. This time the cocaine was reduced to a couple of drops and the eserine omitted.

Vomiting and headache again supervened, and in this eye a slight prolapse of the iris took place.

There was no doubt that the cocaine was the cause of the vomiting and headache.

In another case, a Chinese girl of 16, a quarter of a grain was injected for the purpose of producing local anæsthesia. Shortly after she became pale and collapsed, with dilated pupils and a feeling of being thoroughly ill. With the aid of stimulants these symptoms passed away in about an hour. She never became actually unconscious.

V. *Atropine.*—A young Chinaman, aged 28, came into hospital for old iritis with synechiæ, and a single drop of a 2 per cent. solution of atropine was placed in each conjunctival sac.

It appears that after this first dose he was noticed to be behaving curiously, but the other patients did not speak of it, and by next day he was himself again.

The following afternoon, at about 5 p.m., a couple of drops were placed in each eye. At 7 p.m. I was leaving the hospital when I heard a cry and the noise of a fall.

Going round, this man was found lying in the sand under one of the bridges connecting the hospital blocks. He could give no account of himself, but had been seen to come out of the ward, take off his shoes, fling them over, and then jump over the gangway railing after them.

How he escaped with only a bruise or two is difficult to say. He was semi-delirious, not violent but very restless. The pulse was 120, and there was a slight scarlatina-like rash on chest and face.

By morning the acute symptoms had passed off, but he was still dazed, and had no knowledge whatever of what had occurred. No treatment was employed, save that of watching him and seeing that he came to no further harm.

VI. *Pearl Ash.*—One case of this poisoning has come under the writer's notice. The victim was a young Chinese girl, aged 18, who swallowed a large quantity in order to commit suicide. She was seen by me on the fifth day after the occurrence, and presented a vivid picture of extreme agony.

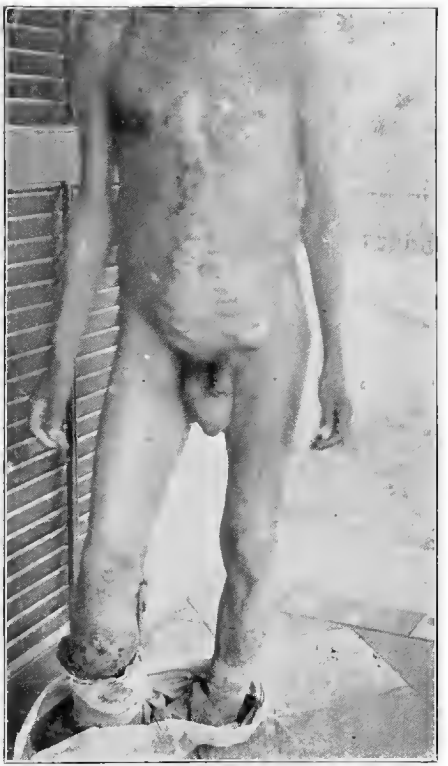
With her knees drawn up almost to her chin, complaining of intense pain in the abdomen, and vomiting incessantly, unable to keep anything on the stomach, the surface cold and clammy, and the pulse almost imperceptible, the case was hopeless, and she died shortly after being seen.

A CASE OF VARICOSE VEINS OF ABDOMEN.

By F. J. Tooker, M.D., Hwaiyuen.

The following case is interesting for two reasons: first, because of the marked degree of dilatation of the abdominal veins; and second, the obscurity of causation of the same.

The patient was a male forty years of age, fairly well nourished. He gave a history of progressive weakness and inability to carry heavy loads. The enlarged veins had existed over the abdomen for about



VARICOSE VEINS OF THE ABDOMEN.

fifteen years. He was able to walk only a few *li* without fatigue; in fact, it tired him to stand for the few minutes required to take his photograph.

The patient was seen but once, and physical examination was not so complete as one would like. No increase in size of liver or spleen was demonstrable, nor could any abdominal tumor be made out. The superficial veins of the abdomen were enormously enlarged and tortuous. Between the pubes and umbilicus they were in places as large as a man's finger. The veins were also decidedly varicosed over the right thigh and leg; the latter being the site of an extensive ulceration.

If mediastinal or intra-pulmonary growths existed as the cause, due to their pressure on the inferior vena-cava, they were not sufficiently prominent to be found on a rapid examination. However, to quote F. T. Roberts: "One of the most important pathological effects of chronic mediastinitis is that it often leads to compression of certain mediastinal structures, or to other physical interference with them. It is most likely to involve the large vessels, especially the veins. In several instances the superior vena-cava has been implicated and sometimes occluded. Many years ago a remarkable case came under my observation, with all the symptoms of complete closure of this vessel, in which the necropsy revealed no more than a limited mediastinal fibrous thickening surrounding the vein. Other intra-thoracic veins may be implicated singly. . . . Thrombosis may add to the difficulty in the vessels and help to obstruct them."

Portal thrombosis is also a possible cause, which, however, is very rare without its other symptoms.

CASE OF RENAL CALCULUS REMOVED BY LEFT LUMBAR ROUTE.

By R. T. Booth, M.B., B.Ch., D.T.M. and H., Hankow.

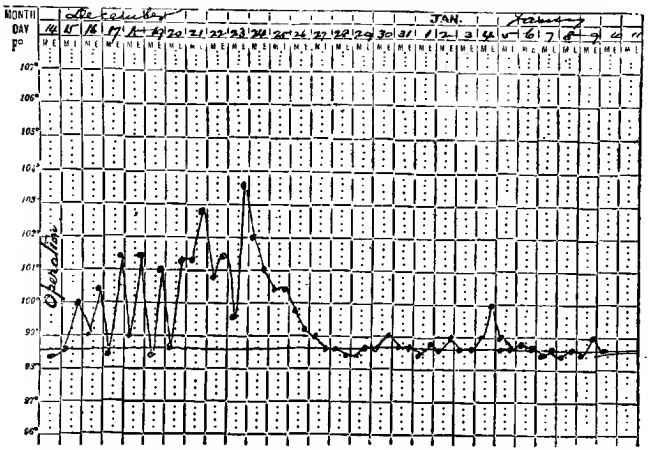
Patient, a missionary belonging to an English Society, had been in China for 15½ years. Two furloughs had been spent in England.

He came into my hands in the autumn of last year with a history of lumbago, for which he had been treated off and on for about three years. No suspicion of any deep cause of the lumbago had ever been suggested to him, and in all probability had not an attack of renal colic supervened, the treatment of the lumbago would have continued along the same lines. One morning in September a severe attack of typical renal colic came on, with pain commencing in the region of the

left kidney; passiug down the line of the left ureter and affecting the left testicle. An injection of morphia gave him ease after a time. A second attack supervened some days later. Shortly after this a trip to Shanghai had to be made, and on his retum home he was completely overhauled and the urine microscopically examined. Pus cells and some few red blood corpuscles were found in the centrifugated specimen, but it was not until some weeks of treatment had elapsed that uric acid in large quantities was found. At that time the patient developed au attack of quinsy, which was very severe and needed surgical treatment of the affected tonsil. During the convalescence from this a third attack of renal colic came on.

For some time the patient was put on a modified 'Haig' diet and treated with alkalis with good result as far as the amount of uric acid excreted was concerned. An examination of the amount of urea excreted, however, showed that only about half the proper quantity was being eliminated. The amount of urine passed daily varied greatly; one day 40 ozs. and the next day 80-90 ozs., and on the day the large quantity was excreted some 30-40 ozs. would be passed in the space of an hour or an hour and a half. Some indefinite swelling aud dulness in the left lumbar region, combiued with the variation in the quantity of urine passed, pointed to a hydronephrotic condition; in all probability due to stone in the kidney.

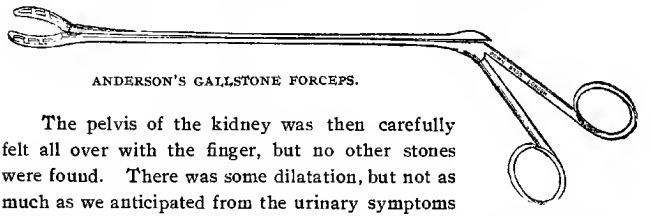
The patient's general condition was anything but good, and at times headache and other symptoms pointed to uræmic poisoning. In consultation with Dr. Aird and Dr. Cundall, operation was advised, and the whole position and risks carefully explained. Consent having heen obtained I operated on Saturday morning, December 14th; Dr. Cundall giving chloroform and Dr. Aird, of Hankow, and Dr. Morley, of Tehngan, assisting. The lumbar route was chosen, and the incision from a point ½ in. below the 12th rib and 2½ inches from the spine downward and slightly forward until near the crest of ilium was made; here the incision was ultimately prolouged almost directly forward. There was comparatively little room between the 12th rib and iliac crest, as the patient was very long-chested, which conditiou also materially iuterfered in bringing the kidney into the wound in the course of the operation. Skin, muscles, etc., were divided in order until the fatty layer was reached and then the fingers were used to clear the space iu order to reach the kidney. It was found very difficult to reach it owing to the high positiou it occupied. With careful exploratiou it was at last located and the perirenal fat was cleared and the kidney laid bare, but with difficulty drawn down to the wound. Having at length brought



the kidney into the wound, it was kept in position by Dr. Aird, who passed his hand in front and tben kept it steady while I palpated it. Careful palpation gave us no positive information, at which I was disappointed, but not surprised. I bad experimented the day before on a pig's kidney, into which I bad introduced a small stone the size of a pea, and found it almost impossible to tell the location from palpation. Henry Morris relates a case wbere it was impossible to feel the stone in a kidney he had excised, even when it was laid on the table and pressure exerted, although the stone was there as demonstrated on slicing the kidney.

Having found nothing by palpation I then proceeded to needling, and for this purpose used an ordinary lady's hat pin, on wbich I bad made a mark beyond which I would not insert it, viz., 2 inches. Passing the needle in from the convex border, commencing below and pointing it toward tbe pelvis, nothing was felt on tbe 1st and 2nd punctures. On passing it in the tbird time from about tbe junction of middle and lower third of the border, still directed obliquely towards tbe pelvis, it was felt to scrape on a stone, a feeling quite characteristic, and under the circumstances decidedly pleasurable. In experimenting on the pig's kidney the previous day I had realised how difficult it was to hit a stone even when you knew it was there and also knew in what position it lay. Leaving the needle in position in contact with the stone, a long tenotome knife was passed in alongside the needle until the stone was

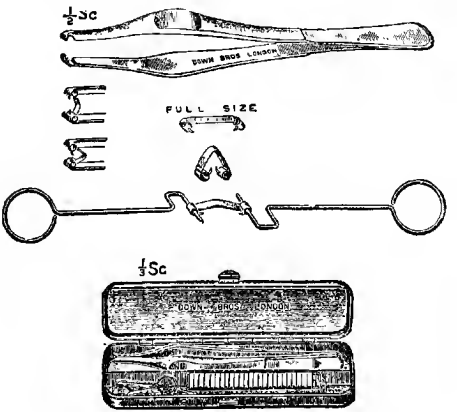
reached ; the needle was then withdrawn and the incision enlarged sufficiently to admit my little finger ; the tenotome still being in contact with the stone. Having felt the stone with the finger the tenotome was also withdrawn. Then dilating the wound with the finger sufficiently to pass in a small pair of lithotomy forceps an effort was made to remove the stone. However the stone lay in one of the upper calices of the kidney and the forceps was too straight to grasp it, so a gall-stone forceps was used, and the stone being easily grasped therewith was withdrawn.



ANDERSON'S GALLSTONE FORCEPS.

The pelvis of the kidney was then carefully felt all over with the finger, but no other stones were found. There was some dilatation, but not as much as we anticipated from the urinary symptoms mentioned above. During this period of the operation there was practically no hæmorrhage, as Dr. Aird, still with his hand supporting the kidney in the wound, easily controlled the renal vessels.

Gauze strips were then passed into the kidney wound and removed and replaced by others which were left in. On releasing the renal vessel no hæmorrhage occurring the kidney was replaced ; the strips of gauze being left sufficiently long to come out of the upper end of the wound. A large drainage tube was also left in, reaching to the back of the kidney and emerging alongside the gauze. The muscles were then



DR. MICHEL'S ASEPTIC METAL SUTURE CLIPS.

sutured with a contiuuous suture of chromic gut aud the skin edge brought together with Michel's serefines, or clips; two or three silk-worm gut sutures heing put in to support them. These clips were nsed especially on account of the rapidity with which they can he used, and as the patient was in a bad way every moment saved was an immense gain. The anæsthetist, Dr. Cundall, had all his work cut out to keep the patient alive, as he took chloroform badly, and at times entirely ceased breathing. Theu the entire wound, with the exception of the upper part where drainage tube and gauze protruded, was completely closed.

A large dressing of gauze-cotton wool was then applied aud a many-tailed bandage fixed over all and the patient put hack to bed.

Superficial dressings required changing every twelve hours for the first week or ten days and after that once a day. In thirty-six hours after operation chloroform was given and the gauze removed from the kidney, which was again repacked. Thirty-six hours later this packing was removed, and as there was no sign of hæmorrhage, no further packing was inserted within the kidney itself. Gauze strips as well as drainage tube were left in leading down to the kidney in order to enahle the urine to escape directly into the dressings. On the third day a slight attack of colic came on, due evidently to passing a clot down the ureter. With that exception, the pain consequent ou operation having suhsided, the patient has heen entirely free from renal pain; the testicular pain also completely passed away with the removal of the stone.

The sinus in the side took longer to completely close than such sinuses usually do wheu they heal completely. The 3rd of February was the last day on which urine came from the sinus, which is now completely healed.

Some urethral and bladder symptoms have given him annoyance during convalescence, but on washing out the bladder with horic acid lotion these symptoms improved.

It is open to question whether it would not have been better to have completely closed the kidney wound and not to have employed drainage. In the hands of a more experienced surgeon such a course would have in all probability been adopted, but under the circumstances it was felt advisable to follow the classic method and drain.

In closing I desire to express my thanks to Dr. Cundall for the efficient manner in which he administered the anæsthetic and made it possible to complete the operation so satisfactorily. Also to Dr. Aird and Dr. Morley for their efficient help in the operation itself. The stone removed was roughly triangular in shape, composed of uric acid oxalates, about the size of a man's thumb nail.

ETHER. OPEN METHOD.

By H. G. Barrie, M.D., Changsha.

I recently spent several weeks in study at the Mayo Clinic, Rochester, Minn., and among the many points of interest, the simple metbod employed by these eminent surgeons in administering their anæsthetics will amply repay the telling, for it is admirably suited to our routine practice in Cbina.

PREPARATION OF PATIENT.

He enters the hospital the day before the operation, and tbat evening receives a tub-bath and two ounces castor oil in a small quantity of beer or malt extract, if an abdominal case.

Next morning food and fluids are witbheld, and the patient walks into the operating-room and getting upon the table has his wrists tied loosely together with a strip of gauze. This is not to control struggling, but to prevent the arms from falling over the edge of the table and injuring tbe musculo-spiral nerve, which results in paralysis occasionally.

While the anæsthetic is being given the preparation of the patient proceeds. This in the estimation of the Mayo Bros. is distinctly valuable in diverting tbe attention of the patient from the ether, and it is said less is required.

Tbe necessary position is at once assumed, whether Trendelenburg or otherwise. The field of operation is scrubbed with warm water and jumbo soap*, using a pad of gauze ratber than a brush, which may injure the skin.

This washing is followed by a solution of bichloride, one in two thousand, after which a gauze sponge, wetted witb Harrington's solution,† is left on the skin for at least 30 seconds, at the end of which time it in turn is washed off with 70 per cent. alchohol and the area protected by sterile towels. The patient is ready for operative procedures.

ANÆSTHETIC.

This is ether given by the drop method. The anæsthetist prepares an original can of ether as follows: After cutting the seal out of an ordinary tin of ether, a cork is inserted niched with two longitudinal grooves, one of which is shallower than the other. The small one serves as an air hole.

* Jumbo soap is a soft, very alkaline soap, containing pumice stone, and manufactured by Graham Bros., Chicago.

† Harrington's solution is severely germicidal, and it does not form insoluble substances with albuminous bodies. Its formula is: Bichloride mercury 3.200; hydrochloric acid .240; distilled water 1200.; alcohol 2560.

In the large one a strip of absorbent cotton is laid, and armed in this way the cork is inserted in the container. The cotton wick protrudes about an inch from the can and serves as a dropper. By clipping it bluntly, the flow of ether is retarded, and for a more rapid drop it may be pointed. A 4-ounce size is most serviceable, but it is well to prepare two cans, a 4-oz. and an 8-oz. The larger serves to anæsthetize the patient and the smaller is sufficient to continue the narcosis when once established. Add to these an ordinary Esmarch inhaler covered with two layers of stockinet, and the apparatus is complete.

To protect the eyes a gauze sponge moistened with water is laid over them, or two rounded discs of rubber tissue may be pressed over them with the warm hand. Should ether get into the eye, several drops of ol. ricini, instilled, will prevent conjunctivitis.

The inhaler now in place, the ether is dropped upon it from the larger tin carefully as though chloroform were used. The face soon becomes flushed, and then it is time to retard evaporation by folding a towel or strip of gauze round the inhaler, leaving only a small area of the dome uncovered to receive the ether which is now given much faster.

The whole procedure should require only from three to five minutes, and as soon as narcosis is established the large tin is laid aside and the small one used. As more ether is required than chloroform a fairly rapid drop is necessary to continue narcosis.

Do not permit your patient to talk, as this tends to excitement. The anæstbetist may address remarks to him, however, which may be most valuable, as his sub-conscious self is peculiarly susceptible to pleasant and tactful suggestions. Be perfectly natural and sympathetic with the patient from the time he enters the operating room, and endeavor to win his aid and confidence in producing a comfortable narcosis.

To breathe naturally is the object aimed at, and to ask him to "blow it away," or "breathe deeply," is poor policy, tending to produce a sense of suffocation, and struggle is sure to follow. The color of the skin, quality of pulse, regular and deep breathing, and the relaxed lower jaw give the picture of a safe and surgical anæsthesia.

It is quite unnecessary and unscientific to test the corneal reflexes, as nothing can be learned from the cornea that cannot be better learned by the other signs. The rate of a pulse is of no great value. The oxygen-tank, tongue forceps, and hypodermic are seldom employed.

The early appearance of symptoms is detected and prevented by permitting a plentiful supply of fresh air rather than endeavoring to

treat symptoms by the above agencies after they have arisen. When the tongue presses upon the glottis, it is drawn forward and to one side by the fingers armed with gauze rather than employing the tongue forceps or ligature. Artificial respiration is almost unheard of, and after ten years' trial this "Open Method" has become the method of choice.

Such preliminaries as nitrous oxide gas, or sopolamine and morphia are considered unnecessary, and the latter even harmful. When we are reminded that in 20,000 administrations no deaths have resulted from this method in their hands, its value need not be argued. During the year 1907, 4,607 general anæsthesias were given, and out of this number only four were done with chloroform and 28 with chloroform and ether. Cases of alcoholics and acute peritonitis require them at times to deviate from their general practice in the choice of an anæsthetic.

It is interesting to note that the anæsthetic is entirely in the hands of nurses at the Mayo clinic, and, in a nut-shell, the reason is they do not aspire to become either surgeon or assistant-surgeon, but give their undivided attention to the administration.

The essential charms of the method are simplicity of apparatus and technique, absence of fussiness on the part of the anæsthetist, and absence of anxiety on the part of the surgeon.

THE USE OF NATIVE DRUGS.*

By WILLIAM WILSON, M.D., Hsutingfu.

The paper will not be strictly limited to the subject of native drugs, but will embrace the cognate theme of native materials and appliances and the way in which these may be turned to useful account in various medical, surgical and pharmaceutical operations.

The whole subject will necessarily be regarded very differently by various members of the medical missionary body, and this difference of view will be almost entirely dependent on the geographical location of the individual doctor. To those situated near the coast the subject will appeal very little, while to the ever increasing number of doctors in the far interior the subject is one of real practical interest, and this specially in the case of doctors not only far in the interior but also far away from water communication and whose medical supplies have to be carried by cart or mules, at great expense and serious risk, ten and even twenty days' journey after having already been carried

* Conference Paper, 1907

hundreds of miles or even a thousand miles by water up rivers where rapids and wrecks are only too common occurrences.

For some reasons I think it may be more convenient if I transpose the order of the two sections of my subject and take first: A brief account of some methods and appliances I have found of very great advantage in the prosecution of my work during the twenty-four years I have been in China.

CONCENTRATION OF NATIVE SPIRIT.

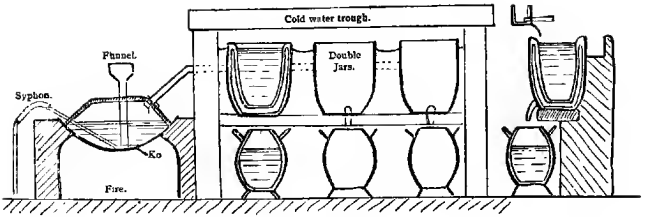
There are, as we shall see, in China, a large number of drugs belonging to the various Western pharmacopœias, many of which are just as good as those obtained from home, and the employment of these is a very great convenience and often a not inconsiderable economy, but when all this is admitted the advantages thus gained, when all put together, are surpassed by the benefits derived from the manufacture of our own tinctures, liniments, spirits, etc.; in many cases from the vegetable drugs obtained locally and in others from drugs ordered from home.

Probably most medical missionaries in China thus prepare their own tinctures, using the rectified spirit from Shanghai or Hongkong, and for many of those stationed near the coast or in easy water communication with the coast probably no other plan is necessary.

Let us, however, think of doctors situated far in the interior provinces where land and water transit alike are full of risk, and where the doctor has always before him the uncertainty as to whether his spirit from the coast will ever reach him or only the empty tins or casks in which it started its journey. This is no imaginary picture, but a record of my personal experience before necessity led me to commence the plan of concentrating native spirit. This plan has rendered me, for most of my time in China, independent in the matter of rectified spirit.

To avoid the neccessity of a lengthened description of apparatus I have made a few diagrams, which will, I believe, render the matter clear. In these diagrams I have represented two methods of spirit concentration. The one I employed for many years in Hanchong and the other I always employ here.

When the materials for constructing the latter apparatus are obtainable locally, it is in many respects the easiest to work, so I will describe it first.



Front Elevation—partly shown in Section. Cross Section.

The apparatus consists of a boiler and a condenser. The boiler is simply a large native cooking "ko" (鍋), say 30 inches in diameter and capable of holding ten gallons of spirit. It is covered by an earthenware cover (鍋 盖), and through a hole in the top by means of a funnel the charge of spirit is poured in. At one side is a pipe which conveys the spirit vapour to the second part of the apparatus, namely the condenser.

The condenser is a marvel of construction and efficiency. They are to be obtained throughout Sich'wan, and I hear they are made too in Kansuh, so probably they are known all over China. This condenser is known as a 夾 鋼 or double jar, twenty inches high and eighteen inches in diameter, and consists of an outer and an inner jar, in which the upper edges are joined together before the baking.

A hole in one side of the outer jar admits the spirit vapour into the annular space between the two jars. The inner jar is filled with cold water and thus the outer surface of the inner jar presents a very extended condensing surface for the spirit vapour, which condensing runs down to the bottom of the outer jar and passes out by a small nozzle at the bottom. The price of such a jar here, of the size described, is only 400 cash.

I have found it best to have three such jars arranged in a row and connected together as in the accompanying diagram by tin tubes; the whole securely built up with stone or brick and lime. A water trough is so arranged that by the withdrawal of one or other plug cold water can be quickly run into the jars. As soon as the spirit in the "ko" boils the vapour passes into the first jar and the condensed conceutrated spirit is soon running out in a good stream. After say twenty minutes the water in the inner jar has become too warm to effectively coudense the vapour and it has to be scooped out into the second trough, whereby it runs away, and a new charge of cold water runs in.

As soon as the water in the first jar becomes hot and then no longer capable of condensing the spirit vapour the latter simply passes on to the second jar, where it condenses, and should the water in both jars be allowed to become hot the vapour would pass on to the third jar, but this rarely occurs, as a regular alternate changing of the water in the first two jars always supplies sufficient condensing area in either one or other of the jars.

Our custom is to measure out a ten-gallon charge of the weak spirit and go on with the distillation till five gallons have come over, then syphon off the remainder, which is practically only water and put in a second charge of ten gallons.

In this way five charges of ten gallons each, or fifty gallons in all, can easily be manipulated during a morning; the whole process is worked by a dispensary boy, the sequence of whose duties are as follows:—

1. Light the fire.
2. Measure out ten gallons of weak spirit.
3. Charge it into the apparatus.
4. Fill up the cold water trough,
5. And from it fill up all the jars.
6. Receive the spirit as it comes over.
7. Change the water when it becomes hot.
8. Measure out a fresh charge of spirit in readiness.
9. When one-half has come over
10. Partially draw the fire.
11. Syphon off the residual water.
12. Recharge with ten gallons more spirit.

The joint between the "ko" and the "ko kai" is best made with native paper made into a pulp with water.

If the syphon is found troublesome or the syphoning too slow a method, it is often quite as convenient to lift off the "ko kai" and pour the new charge in directly, after scooping out the residual water.

The weak native spirit with which we start has a specific gravity of 945, i.e. 45 per cent. alcohol, and the first distillation results in a spirit of varying strength; that coming over first being strong and then gradually deteriorating as the process proceeds, but the average strength of the distillate when one-half has come over is 885, specific gravity, that is, a spirit a very great deal stronger than proof spirit (920), being almost exactly midway between proof spirit and rectified spirit.

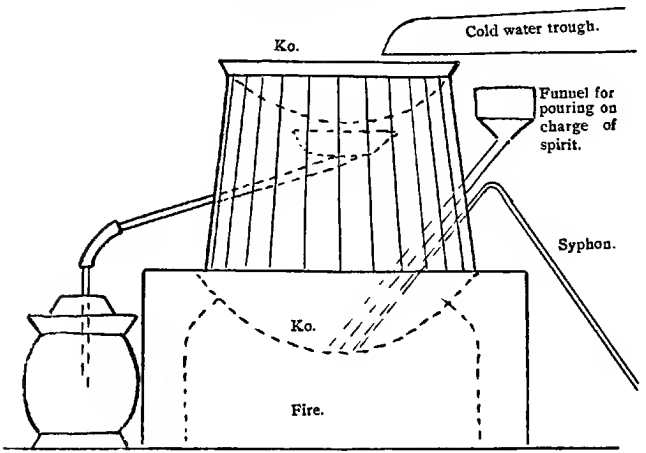
If this first distillate be again passed through the still and that which comes over be divided into five successive portions their strength will vary from proof spirit to 854, specific gravity; that is, to a spirit only 20 per cent. weaker than rectified spirit.

By a third distillation rectified spirit is obtained.

We do not now, however, as a rule go beyond the first distillation, for so very few tinctures require rectified spirit. So for these we obtain a small amount from the coast, and for all the other strengths we use native spirit either as it comes from the shop or as concentrated by us.

The five qualities of spirit specified in the present British Pharmacopœa are thus obtained :—

20 per cent.	Sp. Gr.	976	Native weak spirit and water.
45 ,,	,, ,,	943	Native weak spirit.
60 ,,	,, ,,	913	1st distillation and water.
70 ,,	,, ,,	890	1st distillation.
90 ,,	,, ,,	834	Rectified spirit from the coast.



If in some localities these double jars cannot be obtained then a very efficient apparatus can be made as in Diagram No. 2. Here the "ko" for boiling the spirit is the same as already described. Into this is fitted a tsen tsi (甑子), like a barrel without top or bottom. On the top of this rests a second "ko" full of cold water. Under the upper ko is suspended by three wires from the walls of the "tsen tsi" a tin washhand basin with a hole in the bottom leading into a tin tube soldered to the basin and which projects through a hole in the "tsen tsi" to the outside where the spirit is collected. The rationale of the apparatus is obvious—the spirit boils and its vapour as it rises impinges on the cold under surface of the ko and is condensed and runs down into the basin, whence it escapes to the outside and is collected.

In this apparatus the successive charges may either be poured into the ko by a funnel, and the residue syphoned off; or the upper "ko" may be removed, the residue scooped out, the new charge put in and the ko replaced. This latter method requires two men, while the other method, with the double jars, can be easily worked by one man.

The price we here pay for the weak spirit is about sixty cents a catty, and its specific gravity is 943 and proportion of alcohol 45 per cent.

PREPARATION OF SPIRITS OF NITROUS ETHER.

I remember the disappointment experienced on opening a case of drugs which had just completed its long tedious journey into the interior to find a large bottle of spirits of nitrous ether absolutely empty. Our previous stock was already exhausted and I was a thousand miles from Shanghai and at least 400 miles from any place whence our stock could be replenished. Necessity is the mother of invention, and it was a moment of no small delight when a day or two later, with the crudest possible native appliances, we were able to make our own nitrous ether.

A common native earthenware jug, such as could be bought any where for twenty or thirty cash, was obtained, its mouth closed with a cork through which passed a bent glass tube connected with one of the double jars already described. Into this jug the ingredients were placed — copper, iron, spirits, nitric and sulphuric acid in proper quantities, and the whole placed in a cooking "ko" full of water, constituting a water bath.

The fire was lit and when the water approached the boiling point the spirit of nitrous ether came over freely, and condensing in the double jar ran out in a good stream, and before an hour had elapsed we had a stock sufficient to last us many months.

On this our first experiment we placed a thermometer in the jar, but finding the requisite temperature of F. 175° in the jar was obtained coincident with the water in the ko reaching the boiling point, we in future discarded the thermometer as being unnecessary.

CALCIC PENTASULPHIDE—ITS PREPARATION AND GREAT VALUE.

What a comfort to have such a high sounding name to figure at the head of a paragraph which so soon will have to descend into such a humble region as the consideration of the treatment of acarus scabiei.

I suppose all doctors come to China with the firm conviction, inherited from hospital experience, that for this interesting disease the one essential is unguentum sulphuris, compounded of sulphur and lard,

and each doctor begins with making a supply of this ointment and soon finds the demand so great that his outlay in lard becomes a yearly increasing expenditure.

For twenty years I have never used ung. sulphuris, and this certainly not because I was living in a region where scabies was less in evidence than elsewhere.

There were many Mohammedans among my patients, who naturally objected to the lard, and happily in Ringer's Therapeutics I found a more excellent way.

Our custom now is to put ten gallons of water into the cooking ko, ten pounds of sulphur and ten of lime, boil and stir well for twenty minutes, then withdraw the fire, allow the sediment to settle, syphon or pour off the supernatant fluid and preserve from the air in well closed jars. The beautiful clear orange colour of the fluid predisposes patients to believe in its efficacy and it is far more efficacious than the lard preparation, as stands to reason from the sulphur being actually in solution and thus capable of entering where sulphur in the solid state, even though finely divided, could not enter.

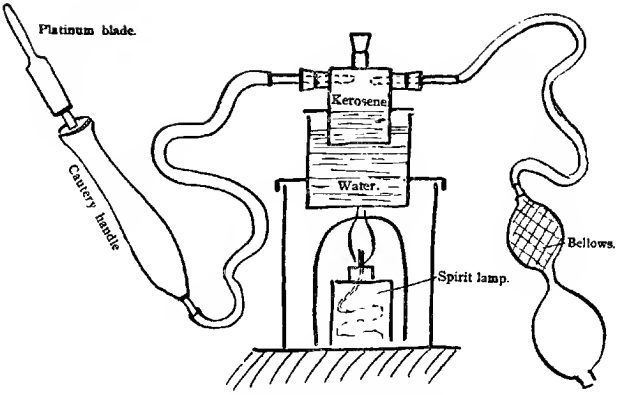
It is vastly cheaper to make, as water is cheaper than lard.
It is a much more cleanly preparation to use.
It is more efficacious.
It is no offence to the Mohammedan.

As a local application I have used it for many years in preference to any other remedy in diphtheritic patches in the throat. It is an unstable compound and so becomes decomposed on exposure to the air, but in well-closed vessels it keeps indefinitely. Acted on by an acid it yields sulphurretted hydrogen, and its beneficial action locally is due to the bactericidal action of this gas.

A KEROSENE PACQUELIN CAUTERY.

Some years ago I tried all the foreign and native drug stores in the foreign settlement at Shanghai in the hope of procuring some benzoline for my pacquelin cautery. At last, when I had almost given up hope, I obtained some, but the difficulty I had experienced led me to try whether some other oil could not be used instead, which was more easily procurable.

The result was that I found kerosene oil, now everywhere obtainable in China, could be used as a substitute for benzoline. Benzoline, besides being an inflammable oil, is highly volatile, and on this its efficacy depends. Kerosine, on the other hand, is very slightly volatile, but if we raise its temperature we of course increase its volatility artificially.



The diagram accompanying this paper explains our apparatus. A small closed tin containing some kerosene oil is fitted with the inlet and outlet pipes as in the benzoline container of the pacquelin.

This tin vessel is suspended in a slightly larger tin containing water, which is itself suspended over a spirit lamp. As soon as the water approaches the boiling point the temperature of the kerosene is such that it is as volatile as benzoline at the normal temperature, and in this way I was able to employ it in the pacquelin cautery with success that left nothing to be desired.

HUMAN BELLOWS VERSUS INDIA-RUBBER BELLOWS.

I can imagine some one saying: "It is not the benzoline that troubles me, but the way India-rubber perishes in China, so that my cautery fails me through the India-rubber bellows becoming hard and cracked and losing its elasticity and in other ways getting out of order."

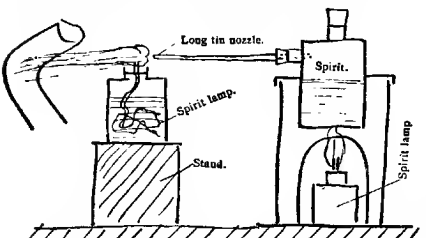
I hardly dare to suggest such a very humble expedient, but as it renders a person independent of the India-rubber bellows of his cautery it is worth mentioning that each of your assistants possesses a very efficient bellows which does not get out of order. It is a very easy thing to work the pacquelin cautery if you substitute your assistants' lungs and cheeks respectively for the two portions of the India-rubber bellows and allow him to blow a steady blast of air through the benzoline or kerosene chamber. We don't need to be reminded that the air thus blown in never reaches the part under operation, but comes out of the cautery handle three or four inches above the working point

and directed away from it, and were it otherwise it would be of no consequence, as the air blown in has been sterilized by its contact with the interior of the red hot platinum knife.

I have had made this morning by a tinsmith a very simple arrangement which might be called a "water bellows," by which a blast of air of any required pressure can be obtained and used at will either in the case of a throat spray, local anæsthetic ether spray, or pacquelin cautery, thus rendering us independent of these troublesome India-rubber accessories of such apparatus.

SPIRIT BLOW PIPE.

In preparing apparatus for chemical experiments how continually we require to bend a piece of glass tubing. Up to a certain size of glass tubing this is easily effected by the heat of our ordinary spirit lamp flame, but for larger sizes the heat so obtained is inadequate.



The accompanying diagram is a representation of the apparatus we use, made by a tinsmith in a couple of hours.

A small closed vessel containing spirit is suspended over a spirit lamp. The vessel is provided with a tin tube tapering to a fine nozzle (it was made by beating the tin round a large needle), from which the spirit vapour issues, and passing through the flame of a second spirit lamp, produces a long hot, powerful flame, in which quite a large glass tube can be easily heated to the requisite temperature for bending.

PLASTER OF PARIS.

I wonder whether others have had the disappointment I have experienced when compelled to fall back upon native plaster of paris through the foreign plaster having deteriorated through time or become exhausted before a fresh consignment had arrived.

After many trials with native gypsum I found that the secret of success lies in the proper roasting of the gypsum. If roasted beyond about 270° Fahr. it won't set properly when mixed with water, and the cast or mould thus made is lacking in firmness, and thus quite unfit for

mechanical dentistry. If insufficiently roasted a like result is obtained. I tried heating it in the oven of a foreign cooking stove, carefully noting the temperature by the thermometer, the bulb of which was in the tray of gypsum.

If the gypsum is heated in lumps success is impossible, for while the outer part may be overheated the inside of the lump may be underheated.

I have found the only way is to crush the gypsum first into powder, place it in an iron pot over the fire, keep it constantly stirred, so that all may be uniformly heated and remove from the fire as soon as the thermometer registers 270. At about this temperature it has all the appearance of boiling through the escape of contained air causing the whole mass of powder to be in a state of ebullition.

ABSORBENT WOOL.

As for many years I did not know how wool was rendered absorbent, it may be others are in the same condition. Happily the process is the simplest imaginable. Boil the native cotton wool in a large ko full of water, to which you have added say half an ounce of carbonate of soda. Then take the wool out, spread it on a mat to dry, and when dry have it beaten out in the ordinary Chinese way by the "t'au mien hwa tih". Wool thus prepared has wonderful absorbing powers.

NATIVE DRUGS.

There are scores of valuable drugs of the Western pharmacopœas which can be obtained almost anywhere in China and relied on as perfectly genuine if you take the precaution of buying them in their original condition and not pulverized, in which latter condition it is impossible to tell whether or not they are free from adulteration.

Some of the drugs, though obtainable in China, are better purchased at home, especially when they are only used in small quantities, such as Acouite root, and, like acouite, are of a poisonous character and existing as several varieties of species difficult to identify.

The following list embraces most of those drugs we are continually using:—

Camphor	Gentian	Alum
Capsicum	Sulphur	Borax
Cinnamon	Liquorice	Ferri Sulph.
Cardamom	Catechu	Plumbi exidum
Nutmeg	Opium	Plumb. carb.,
Cloves	Nux Vomica	etc., etc.
Galanga	Rhubarb	

Several of our most largely used stock pills are composed solely of native drugs, such as anti-opium pills, iron tonic pills, digestion pills, diarrhœa pills. For cough pills and purgative pills we depend partly on foreign ingredients.

The pills made by us of purely native materials we sell at prices ranging from 5d. to less than 2d. a gross and probably the actual cost of them is less than half of these figures. Hence a very great saving over using foreign pills, of which probably 9d. a gross is the cheapest.

Should any of the facts narrated in this paper prove of service to any doctors working in remote and inaccessible regions, the object of the writer will be fully attained, and should any be desirous of further information as to the actual construction of any apparatus mentioned here the writer will be glad to reply to any communication on the subject.

Before closing this paper I desire to draw special attention to a book which during the last twenty-four years has been the greatest possible help to me in this special department of native drugs and their uses. I refer to Dr. Porter Smith's book entitled Chinese Materia Medica.

I accidentally came across a copy before coming to China in 1882, but I believe even at that time it was out of print. Certainly for very many years it has not been obtainable, so probably there are very few medical missionaries in China who possess or have even seen a copy.

I was consequently delighted about a year ago to receive a letter from the Presbyterian Mission Press asking for a loan of my copy with the purpose of issuing a new edition. If it is out by the time of the Conference, I have no hesitation in strongly recommending every medical missionary present to secure a copy at once.

[NOTE.—The Materia Medica is now in press, being thoroughly revised and brought up-to-date, including standard romanization, by Dr. G. A. Stuart.—ED.]

A CASE OF CHRONIC SKIN DISEASE.

By W. E. PLUMMER, M.D., Wenchow.

The patient was a healthy looking, well nourished man, forty-one years of age.

History.—The ulcers began when he was sixteen years old—that is, twenty-five years ago. They first appeared on the buttocks and have been active ever since, healing in one place while spreading in another.

His wife is well and has never had similar trouble. Five years ago a daughter was born, who died two months later; there have been no other children.

On Admission.—The disease is limited to the buttocks, thighs and legs; elsewhere the skin is healthy. The ulcers are mostly linear in shape with raised edges or rather the whole site of the ulcer is raised and the skin around is puckered as if drawn in by the contraction of connective tissue; some of these ulcers are continuous with linear scars, showing the former site of ulceration. In front of the knee the sore has healed, in the centre and on the buttocks the raised edges of the skin have almost met and effected healing. The granulations are glazed. On the back of the calf are ordinary looking ulcers without the raised puckered edges.

Treatment.—Potassium iodid and mercurial ointment were first given a trial, but as no improvement was observed the ulcers were scraped under chloroform. Under the soft granulations was a firm fibrous tissue, such as is met with in most cases of tubercular skin disease.

After operation healing commenced, but the patient left at the end of ten days, so the ultimate result cannot be stated.

Remarks.—I have not seen a case like this before, nor can I find a description in "Mracek's Diseases of the Skin" which in any way tallies with the appearance of this patient.

The way in which the granulations were scraped away, leaving a firm base of fibrous tissue, suggested a tubercular process in which there had been great resistance on the part of the body, resulting in connective tissue proliferation, but the man's robust appearance made it difficult to understand how the tubercle bacillus could be the cause of his trouble.

In Consulation.

YOKOHAMA, June 28th, 1908.

DEAR DOCTOR: I am writing just a note in regard to that peculiar face case. I am sorry that I did not get the full particulars written down—as I saw it during the hurry of leaving, being called to my attention by the head assistant. The man was between 45 and 50 years of age. The trouble had existed three or four years. It had started with a sensation of irritation and itching, and this is the only thing complained of at the present time.

The condition is strictly limited to one-half of the face and head, and is worse, as the picture shows, near the medium line. The hair in a streak half way back on the scalp is lost, probably from scratching as the skin is raw. The condition does not extend below the lower lip, nor higher than the apex of the head.

It extends into the right nasal cavity, and as can be seen from the photo the ala of the nose is scratched away. The eye is destroyed and shrunken.

In spite of the destruction produced by the scratching he continues to scratch. What is it? Why limited to the side of the medium line and not extending into the chin? There were some things in my hurry I omitted to ascertain; for example, sensation for heat and cold and the extent of the anæsthesia, though my remembrance is that it was co-extensive with the itching and the destructive lesions and did not extend to the side of the forehead.

The other side of the face was normal in every way, especially was there no numbness, nor loss of hair or eyebrows.

I failed to obtain any history of other diseases, as syphilis, leprosy or malaria. I am sorry that I cannot from memory give more accurate data.

Allow me to express my appreciation of the increasing interest of the last few issues of the JOURNAL.

Yours sincerely,

JAS. BUTCHART.

LUCHOWFU.

KASHING, June 23rd, 1908.

DEAR DOCTOR: Thanks for your letter. I have had four or five cases of Schistosomum Jap. infection. I tried at random feeding three of them on copper sulphate about gr. $\frac{1}{4}$ t. i. d., and also quinine

A PECULIAR FACE CASE.

bisulphate gr. x t. i. d. for fever which I took to be malarial and not due to the Schist. Jap. All have improved *slightly*. Whether it is a mere coincideuce or not I am not prepared to say. One who had deep jaundice has entirely gotten over that feature of his disease, and his temperature has heen normal three or four days. I suppose my diagnosis of the ova is correct, as I can find no other picture resembling these ova except of Schist. Jap. They are a little larger than the *Asc. lumb.* eggs and the sharp end of the brute, inside the egg, has a somewhat radiated appearance.

One or two of these cases have also been associated with another guest that we see here fairly frequently. We see the "hobnailed" eggs so often that we get tired of looking at them. Three specimens from the ward all had them. My bill for santonin is getting formidable.

I have another patient that I have diagnosed as an ectopic and am trying to persuade her to let me operate, but she has not yet consented. I told her she would "swell up and burst" if she didn't.

The funny part of it is that I curetted her twice for persistent hemorrhage following abortion. If she really has an ectopic (and I think there is very little doubt of it) she must have originally had a twin pregnancy—one intra- and the other extra-uterine. The uterus seems smooth and clean inside now, and still she keeps on bleeding. She has a good deal of pain, and I can feel a mass as large as a small orange to the left of the uterus.

re Schist. Jap.—I am aware that Manson warns against killing the brute inside the patient, as he considers it more dangerous to harbor a dead one than a live one, but I believe I would rather be a cemetery than an aquarium.

Very sincerely,

W. H. VENABLE.

ST. LUKE'S HOSPITAL,
CHEMULPO, KOREA, July 12th.

DEAR DOCTOR:

I have been meaning to write to you for ages and send you some slides on which I need an opinion, but as usual it has been put off.

The slides are all prepared by rubbing the upper side of a cover slip with a match dipped in the fæces, and if they are at all solid the match is rubbed in them with a drop of water and then rubbed on the slip. This makes a nice thin film and is not calculated to hurt any ova, and there is no general pressure. It also allows the specimen

to be examined wet, and if anything worth keeping is found the cover slip is simply laid on one side to dry and I know what is there ; it seems a better plan than examining it film down as is usually done. Then for a permanent specimen I just pass it, when dry, through a flame and mount in Balsam, but this part of the process in not good. I know that drying in the air does not harm them, for I have at times wetted again one that has been dried but not put through the flame and it is as good as new.

We are hoping to go off on furlough soon, to be in Shanghai September 9th to 11th.

Our branch has been doing some good work, or rather the Seoul part of it, and I hope we shall have a good annual meeting just before we leave for home.

I saw the other day that betanaphthol, gr. 15, two doses at intervals of an hour preceded and followed as usual by aperients is good for ankylosoma, and trying it in two cases have in each also got out tric. dis., which Manson says cannot be regularly obtained. I will report more on this when I have done it more, but you might like to try it too, or to pass it on.

Yours truly,

HUGH F. WEIR.

LUKE THE PHYSICIAN.—Professor Adolph Harnack, of the University of Berlin, who is known as one of the most distinguished of living critical historians of the period at the beginning of the modern era, has occupied himself not a little with various points of medical history. He is considered an authority on such matters of philology as throw light on the details of the history of Greek and Roman medicine. His historical writing has been taken up much more, however, with investigation of Christian origins than with medical matters. It happens, however, that his last book (*Luke the Physician*, translated by J. R. Wilkinson, M.A., New York : G. P. Putnam's Sons, 1907) is one that unites both these subjects, and competent critics have declared it to be one of the most interesting contributions to history of recent times. While in recent years some doubt has been expressed as to the authorship of the writings formerly attributed to Luke, and even more doubt as to the tradition that their author was a physician, Professor Harnack has declared his conviction of the truth of both of these points and gives incontrovertible arguments for them. These arguments are drawn chiefly from the words and expressions which are used in the original version of the writings attributed to Luke. Careful investigation of the vocabulary and style of the author show that the tradition as to his being a physician is true beyond all doubt. The language of these writings betrays inevitably the tongue and the mind of one familiar with the Greek medicine of the time. Attention has frequently been directed to this before, but never with so rich a wealth of illustration and erudition as on this occasion. As has been well said, the argument from philology has never received such skillful treatment as is given it by Harnack. It seems probable, then, that physicians who are interested in this earlier history, especially from its medical aspects, may still continue to cherish the old tradition, according to which one of their number was in that olden time an active factor in the introduction of the ideas of the fraternity of the human race into the world which took place some 1900 years ago.—From the *Journal of the American Medical Association*, November 30, 1907.

Reports of Customs Surgeons.

REPORT ON THE HEALTH OF TENGYUEH FOR THE TWO YEARS ENDING 31st MARCH, 1908.

By Dr. RAM LALL SIRCAR.

1. Geographical Position.—Tengyueh is situated on the left bank of the upper Taiping river, which is locally called Tieh Shui Ho 跌水河, on account of its sudden fall about 90 feet below. It is about 5,365 ft. above the sea level, and is placed on the 25.2° N. latitude and 98.30° E. longitude.

2. Geological Features.—It is said that the town is built on or about the dry bed of an old lake. The soil of the town proper is composed mostly of dark clay, mixed with gravels, and heavy rocks are discovered here and there when an attempt is made to sink a well. The people dig out every year enormous quantities of peat from the paddy fields on the east of the city, which they use as fire wood.

3. Sanitary Condition.—

(a). *Drainage.*—Natural drains are very efficient, but the condition of the artificial drains in the town remains unaltered. No attempt is made to clean them. Had it not been for the need of the gardeners for manure, their condition would have been many times worse than we see it now.

(b). *Latrines.*—There are private latrines in almost every house, but there is no public latrine in the town to speak of, except perhaps a wretched one near the Southern gate. The gardeners carry night soil in open buckets through the crowded streets and store them in open tanks in their gardens, some of which are just close to dwelling houses and main roads. When these tanks are stirred up and their contents are thrown to the garden it causes a great nuisance to the people and adversely affects their health.

(c). *Personal Hygiene.*—The Chinese people of this place seldom bathe, their only cleanliness being to wash the face and hands every morning, in consequence of which a majority of the people suffer from itch, eczema, ringworm, etc. Their long finger nails harbour the germs of many contagious diseases.

(d). *Buildings.*—There has been a marked improvement in this respect during these two years. Besides the new Custom House, quarters for the Commissioner, the assistant, and the outdoor staff, as well as the examination shed, have been built; new barracks have been provided for the soldiers in much improved style, and various old yamêns have been rebuilt and repaired during this time by the local authorities.

4. Meteorolgical.—

Months.	Thermometer.				Total monthly rainfall in inches.	
	Average maximum temperature.		Average minimum temperature.			
	1906-07.	1907-08.	1906-07.	1907-08.	1906-07.	1907-08.
April	71.0	64.0	54.0	48.0	3.42	8.72
May..	78.0	71.0	59.0	56.0	3.01	5.73
June	81.0	77.0	63.0	68.0	9.15	5.27
July...	76.0	71.0	66.0	66.0	11.35	13.80
August	75.0	73.0	65.0	66.0	7.00	12.80
September... ...	79.0	76.0	65.0	64.0	6.28	7.30
October	73.0	74.0	56.0	59.0	3.12	7.00
November... ...	69.0	66.0	47.0	46.0	0.53	,,
December... ...	65.0	58.0	38.0	44.0	,,	4.65
January	61.0	61.0	39.0	35.0	2.00	1.28
February	63.0	64.0	44.0	37.0	1.05	0.25
March	67.0	74.0	45.0	42.0	2.00	0.40

The heaviest rainfall for any one day in 1906-07 is 2.27 inches in July, and in 1907-08 is 2.70 inches in August.

The hottest day in 1906-07 was on the 28th May, 1906; the maximum temperature being 90°, and in 1907-08 was on the 23rd May, 1907, when the maximum heat recorded was 81°. The coldest day in 1906-07 was the 26th Jauuary, 1907, the minimum temperature recorded being 32°, and in 1907-08 the lowest heat recorded was, on the 20th January, 1908, 29°.

There was a heavy fall of snow for ahout two hours on the midday of the 29th January, 1908. The hills and fields looked like vast sheets of white paper.

The prevailing wiud is S. W. throughout the year, but more southerly during the summer months.

5. General Health.—The general health of the foreigners in this port was fairly good in 1906-07 and indifferent in 1907-08; and that of the Chinese population was greatly disturhed hy an epidemic of smallpox which broke out in the town and its surroundiug villages during the end of Decemher, 1907, and lasted for over three months.

6. Classification of Diseases Treated.

Diseases.	1906–07.	1907–08.
Small-pox	1	...
Dysentery	24	8
Malarial fevers	126	117
Venereal diseases :—		
Syphilis	36	51
Gonorrhœa	22	19
Debility and anæmia	22	18
Leprosy	2	1
Tubercular diseases (of lungs)	11	5
Diseases of the nervous system	53	31
,, ,, eye	132	133
,, ,, lungs	33	33
Other diseases of respiratory system...	36	54
Diseases of the circulatory system	7	6
Diarrhœa	29	17
Dyspepsia	69	51
Diseases of liver	11	7
Other diseases of the digestive system	114	100
Diseases of the generative system	24	38
,, ,, urinary system	25	9
,, ,, connective tissue	38	33
,, ,, skin	176	111
Goitre	13	8
Ulcer	122	114
Poison	2	1
Jujunis	48	29
Other miscellaneous diseases	98	95
Midwifery cases	7	9
Total	1,281	1,098

The most prevalent diseases treated were malarial fevers, diseases of the eye, diseases of the digestive system, diseases of the skin, and ulcers. Though there was a severe epidemic of small-pox in the town, as already mentioned, only a single case came under any treatment.

It appears to me that venereal diseases are slowly getting prevalent among certain classes of the people. The local people believe, and rightly, that venereal diseases are not indigenous; they have been imported from Burma.

7. The table given will show at a glance the number of the different sexes of the patients treated during the two years under review.

Year.	Male.	Female.	Children.	Total.
1906–1907	867	302	112	1,281
1907–1908	795	234	69	1,098

There was no death among the foreigners during these two years.

8. Epidemics.—I have never seen a single case of cholera or heard of it during my five years' service in this port. Similarly I have never heard of a single case of bubonic plague occurring in this part of the Yünnan province, though plague is sometimes prevalent in severe epidemic form in the city of Yungchang, a comparatively large town, about 300 *li* from this place. The popular belief is that the disease can never cross the Salwun river on account of the influence of some unknown deity presiding over that part of the country.

Vaccination is getting gradually popular among the people, and there are many quacks at present who are doing a good business in the profession of vaccination. During the last two years I have been able to vaccinate over 100 children each year, with excellent results. But compared with the enormous number of the population the number of children vaccinated each year was very much smaller than those inoculated. The majority of the people still have firm faith in the old practice of "Ch'ui Hwa" 吹花, or blowing the powdered scabs of small-pox up the nostrils of the children. I have already mentioned in my first report in 1903 the evil effects of this practice. This method of inoculation is followed by an attack of small-pox within a week's time, and the severity of the attack depends on the doses blown up, as well as the virulency of the poison in the scabs used. Not a few of the unfortunate children succumb every year as a result of this malpractice; many have disfigured faces, some get partially or completely blind, and several such cases of blindness as the sequel of "Ch'ui Hwa," came under my treatment.

I have mentioned above that there was a severe epidemic of small-pox in this port and its neighbouring villages. I am told that there was a great mortality both among children and adults from this disease. Among the children attacked, some were unprotected, some inoculated, and some vaccinated by Chinese vaccinators. I am glad to note that not a single case, out of the number vaccinated by us during the last five years, has been touched by the epidemic. The Chinese vaccinators, on account of the scantiness of the supply of their lymph, which they receive from Burma, collect scales from the vesicles of successful vaccination cases and store them carefully. They prepare a kind of paste by mixing the powdered scales with human milk immediately before they use it for vaccination. Now vaccination carried on with this paste, does not give the desired result; it only produces some papular elevations in most cases, which may be called modified cases of vaccination.

Hence their so-called successful cases are sometimes seriously affected by the epidemic of small-pox.

The local authorities have advanced a step by establishing a vaccination depôt here, with a view to giving free vaccination among the people. A Chinese doctor of some reputation has been appointed on a monthly salary to carry out the work, and I am told that he has been able to vaccinate over five hundred cases during the last season. But I learn with regret, from various sources, that his work has been very unpopular among the people on account of many children having suffered from blood poisoning after vaccination, and some children were severely attacked with small-pox after his so called "successful" vaccination. One woman brought to me a child who had lost one eye and the other was to be shortly blind. This child was also suffering from pyæmic abscesses, which I lanced. She told me that she had another boy at home who had gone entirely blind. Both these boys were successfully vaccinated at the government depôt and they both were attacked with small-pox about fifteen days after vaccination.

From these two cases, and other three cases of blood poisoning after vaccination, which came under my treatment I gather that either the lymph or scales, whatever it may have been, must have been infected with septic matter, or the lancet must have been dirty. These and other similar cases have brought discredit on vaccination and have prejudiced the minds of the people.

9. *Surgical Operations.*—The following surgical operations were performed during each year under report:—

Name of Operation.	1906–07.	1907–08.
Extraction of tooth	10	18
Evacuation of abscess	11	14
Phimosis, circumcision and incision of prepuce	2	2
Incision of gum boil	1	2
Operation on colic sinuses	1	...
Operation on hare lip	2	1
Tapping of ascitis	1	...
Removal of necrosed bones by incision	2	1
Reduction of dislocation of shoulder joint	1	...
,, ,, ,, ,, elbow joint	...	2
Opening of deep sinuses by incision	...	1
Operation on the eye lid for entropion	2	2
,, ,, ,, ,, ball for peterygium	...	2
Removal of adherent placenta by hand	...	2
Delivery of child by forceps	7	6
,, ,, ,, after amputation of arm from the shoulder joint	...	1
Excision of fatty tumours	1	2
Total	41	56

NOTES ON OPERATIONS.

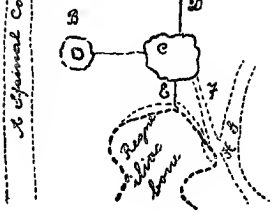
Colic Sinus or Fæcal Fistula.—From the surgical point of view, this case being an important one, I should like to give here a short account of it, which I believe will be interesting to professional readers.

A young woman of about twenty was attacked with a very severe pain in her right lumbar region, attended with fairly high fever. I was called to attend on her, and I did what I could do to relieve her. From the dullness of the area, pain on pressure, redness and slight swelling, I thought she was going to have a deep lumbar abscess. After a few days' attendance I was informed by her relatives that she was quite well and no more attendance by me was required.

Exactly one year after that I was again called to treat a small ulcer on her loin. I found her as bad as I saw her a year ago. On examining the ulcer I found a small opening in the centre of it, and on probing through it I discovered a deep sinus communicating with the abdominal cavity. She was unable to walk properly and had constant pain in her right lumbar region. On pressure of her abdomen, over the painful area, it gave a profuse discharge of fetid pus, which relieved the tension for a while.

I proposed an operation, and after a good deal of hesitation her relatives agreed to it. I put her under chloroform and opened the sinus at a certain distance marked "C" in the diagram. Being single-handed I dared not proceed further in exploring the abdominal cavity, because it is dangerous to entrust an ignorant lay person with chloroform. After a month's treatment the condition of the sinus was not much improved, and I proposed a second operation, which was done with better courage and greater care.

I give a rough diagram below showing the number of sinuses and their course and the point where the fistula had communicated with the intestine :—



A. Spinal column.
B. Outlet of the fistula.
C. A cavity or reservoir of pus.
D. A second sinus upward.
E. A third sinus downward.
F. The fourth sinus communicating with the bowels.
H. Showing the point of communication where part of the intestine was found adherent to the inner surface of the iliac bone.

I have noted above that during my first operation I opened the sinus from B to C. This time I discovered two more sinuses marked D and E, which were opened by free incisions. I then proceeded inward and downward, having my left index finger as a guide through the channel. The calibre of the fistula was too narrow to allow my finger passing through it, so I had to enlarge it by cautious incision. My finger arrived at the inner surface of the iliac bone, where I felt two or three growths as big as peas, which were removed by the finger. And then pushing my finger inward and downward gently I felt that it had reached the gut through an opening. I then hurriedly withdrew my finger, irrigated the wound and dressed quickly.

Before I left her house I gave distinct instructions that she should be confined to bed and that she must live on liquid diet. Next morning I saw her sitting on a chair; she complained that she passed a good deal of wind through the wound, and in the dressings I noticed some fæcal matter. Third day I discovered a few crushed Indian corns in the dressings, mixed with fæcal matter. On being questioned about her diet she denied having taken any solid food. But on pressure from all sides she admitted that she took some Indian corn the day before. One day I found some small seeds of a kind of fruit that resembles the fig. The Chinese patients, as a rule, never believe in living on light or liquid diet; they believe that liquid food makes a patient weaker.

For two weeks the fæcal matter was noticed in the dressings and then the opening in the gut appeared to be closed. She never complained after that of passing wind through the opening. The sinuses B, D and E were entirely healed, and the pus tank C was also healed from all sides, except towards the fistula, F, which had a very small opening on the surface. I tried hard for two months to get that opening closed by all sorts of available remedies, but without success. Both the patient and myself were disgusted, and she stopped putting any medicines on it and depended upon nature. It is a curious fact that nature did its work, and she was quite well after six months without any treatment. She is now in very good health.

MIDWIFERY OPERATIONS.

There were seven midwifery cases attended during the year 1906-1907, six of which were primipara and one was multipara. In five out of the six primipara cases living children were delivered by forceps, and both the mother and babies were doing well. In one case a dead child was delivered. The seventh case, a woman of about thirty-five years old, died immediately after delivery, due to failure of heart.

During the year 1907-1908 nine cases of midwifery were attended. The two cases of adherent placenta shown in the list were primipara, and they had their placentæ adhering for many hours after the children were born. In each case the placenta was separated from the uterus by hand ; the patient doing well. Out of the remaining seven cases six cases had head presentations, and all were delivered by forceps. In one case only a dead child was born. The seventh case was a multipara, who had arm presentation. Before my arrival it appeared to me that somebody who attended on the woman, must have pulled the hand of the child with the idea of helping towards a speedy delivery. But it made the case worse. The arm advanced to such an extent that it was impossible for me to put it back. As soon as I put it back it slipped down immediately. After about two hours' unsuccessful effort to turn the child's head downward I decided to amputate the arm, as the child appeared to be dead. So the patient was put under chloroform and the arm of the child was separated from the shoulder joint, and it was then an easy matter to effect delivery. The trunk and the legs were pushed up and the head was brought down in proper position. After this I introduced forceps and brought the head without any difficulty. I had great anxiety about the patient's health, as she had a good deal of laceration, as well as exhaustion, but happily she recovered entirely, and now she enjoys excellent health.

In this connection I wish to speak a few words about my experience in midwifery cases in this part of China. During five years' practice here I have never met a country midwife in any house who knows anything about it. The woman under labour is entirely left to nature, and nobody helps her in affairs concerning delivery. The mother of the woman is generally the person who attends her sympathetically ; it is supposed to be her sole duty to attend her in such a time of trouble. Her mother-in-law and sisters-in-law, etc., do not even touch her as a rule. In many instances I have seen them peeping through the windows and doors.

MISCELLANEOUS NOTES.

Three cases of leprosy were treated during these two years : one being a young woman of about twenty-two years, who had lost some fingers and whose feet were ulcerated. She does not believe in internal medicine and always takes medicine for external application. The results of the other two cases were not known.

Three cases of poisoning shown in the list were cases of opium poisoning, of whom one died and two recovered.

The China Medical Journal.

VOL. XXII. SEPTEMBER, 1908. NO. 5.

The yearly subscription to the China Medical Missionary Association is $4 Mex., payable in January of each year. This includes the JOURNAL and postage on the same, whether local or foreign.

All changes of address, departures on and arrivals from furlough should be notified to the Secretary and to the Presbyterian Press. Members are requested to invite new comers to join the Association.

The Editors will be obliged if all those who are building hospitals will send copy of plans and detailed description (in duplicate if possible). These will be loaned, on application, to members who are proposing to build.

AN AMBULANCE FOR THREE.

Editorials.

THE SPREAD OF TYPHOID FEVER BY PEDICULI.

An important article on this subject has recently appeared in the *Medical Weekly* of Munich. The author argued that as typhoid bacilli occur in the blood and especially in the rose spots, they should be present in cutaneous parasites infecting such patients. In 1901 Tsujitana isolated the plague bacillus from a flea caught on a man suffering from plague, and later Herzog confirmed his observations. The writer of the above mentioned article placed fleas and lice found on typhoid patients and their nurses in sterilised test-tubes, exposed them for a few minutes to one in 1000 solution of perchloride of mercury, washed them thoroughly with sterilised water and pounded them in a sterilised

mortar. The pounded parasites were then injected subcutaneously into white mice and inoculated on various culture media. Typhoid bacilli were obtained from cultures and from organs of the inoculated mice. Six pediculi corporis from the clothes of a typhoid patient were treated as described. A mouse inoculated hypodermically with an emulsion of their bodies on May 31st, died on June the 3rd. Typhoid bacilli were isolated from its organs and blood. Nutrient media inoculated with from one to six pediculi capitis from the same patient all showed colonies of typhoid bacilli which were also present on the inner surface of the test-tube which had been used for the collection of the pediculi. Similar results were repeatedly obtained. But in two cases fleas found on nurses of typhoid patients were examined bacteriologically, and showed no typhoid bacilli.

The writer claims that 75 per cent. of the pediculi corporis et vestimenti infecting typhoid patients contain virulent typhoid bacilli. The failure to obtain the specific organism in the fleas found on the nurses was possibly accidental. If more material had been obtainable the results might have been positive. In any case the experiments suggest that parasites may play a considerable part in the spread of infectious disease.

TRANSMISSION OF RELAPSING FEVER BY MEANS OF LICE.

In the *B. M. J.* of December 14th Capt F. P. Mackie, I.M.S., brings forward evidence in proof of the above. He investigated an outbreak of relapsing fever which occurred in the Nasik Mission Settlement among the children. The boys and girls lived under similar conditions. Twenty-five out of 170 boys were attacked and sent away, and of the 145 who remained, 137 were attacked, nearly all in a month. On the other hand, out of 114 girls about 15 contracted the disease, and among these it spread slowly, so that the outbreak lasted three months. Of the first 15 girls attacked everyone seemed to have contracted the disease in the boys' ward, where she had acted as nurse. Similarly nearly every casual visitor who spent any time in the boys' ward contracted the disease. This dangerous infectivity was strikingly absent from the girls' ward. There the

attendants did not contract the fever, and even when the infection seemed to get hold of the building itself the cases occurred at long intervals, and the disease spread with difficulty. The most notable point in which the boys differed from the girls was that they were infested with body lice, from which the girls were almost free. A large percentage of the lice taken from the infected ward contained living and multiplying spirilla. The stomach of the louse was the chief seat of the multiplication, and this was carried on in face of active digestion and after the disappearance of all other cellular elements. Other organs became secondarily affected. The secretion expressed from the mouth of the infected lice contained numbers of living spirilla, and they also existed in greater or lesser numbers in the upper alimentary tract. The ovary was frequently affected, but spirilla were not found in the deposited ova. With the increase of the epidemic among the girls body lice became more in evidence. With the subsidence of the epidemic among the boys the number of infected lice diminished.

Many epidemiological facts points to this mode of transmission. Relapsing fever has always been associated with poverty-stricken, overcrowded, and half-starved communities. Under such conditions *lousiness* prevails at its worst. Relapsing fever is a "personal" and not a "place" disease, and infection spreads from person to person very rapidly after only a few days exposure, and mere contiguity without contact is not sufficient to carry on the infection.

[It is interesting to note that the louse is not merely credited with carrying the spirillum of relapsing fever, but some few years ago Daniels, of the London School of Tropical Medicine, suggested that in all probability the poison of beri beri was carried by lice.—EDITOR C. M. JOURNAL.]

PATENT MEDICINES AGAIN.

A certain wholesale drug firm hereabouts, recently cruising over the living ocean of Chinese life, bumped into a torpedo labeled "W. H. VENABLE, KASHING," and received a fearful jolt. Dr. Venable has put into our hands a most interesting correspondence between the above firm and himself, which was developed by the attempt on the part of the drug firm to make a paste brush of Dr. Venable for pasting all over the city of Kashing the advertise-

ments of an anti-opium remedy, put up in proprietary form with a proprietary name and for strictly proprietary purposes. The firm also tried to secure Dr. Venable's services in the matter of starting an ageucy in Kashing for the sale of this sure cure. The correspondence makes most delightful reading. The cheek of the firm, and the sublime grasp of the situation by Dr. Venable, are opposing forces of a very strenuous variety. We understand that a determined attempt has been made by this firm to secure like services and play a similar species of fool with not a few other medical missionaries, and that some of the brethren have allowed the cap to be fitted. We should like to make a great variety of remarks on the subject, but must confine ourselves to the following few.

It is legal and quite within the legal rights of the firm to put upon the market a proprietary remedy for the opium habit. It is also legal, but not ethical, for a medical missionary to help cram it down the throat of Chinese victims. We do not ourselves believe that there is known at the present time on the earth any drug or combination of drugs that may be depended upon to cure even a very limited number of opium habitués. As Dr. Venable says :—

"Will you allow me to say that I have very little faith in proprietary remedies, and least of all in cures for the opium habit. I am not in the habit of using or recommending proprietary remedies, and am especially opposed to remedies that claim to cure the opium habit, as I do not believe that any such specific exists. For this reason I will be obliged to decline to have anything to do with advertising the remedy. Moreover, I think you will do yourself harm with your medical missionary patrons if you continue to push the sale of this medicine."

And again, in a later letter :—

"I simply repeat that a doctor who habitually gives medicines that he does not know the composition of, is not faithful to his high calling ; and if there are any such among the missionary body, so much the worse for the missionary body.

"However, the chief point in my letter was in regard to the using of a so-called remedy for the opium habit. If you will excuse my saying so, the very fact that you seem actually to believe that your remedy will cure the opium habit shows that you have not the slightest conception of how strong a hold the habit has upon those who indulge in it. A certain number of mild cases can be cured by almost any of

the ordinary remedies used for this purpose, but the more difficult cases require study of the individual case by a doctor, a tactful combination of bodily restraint and moral persuasion, and every resource that the doctor has at his command. The treatment has to be varied to suit the symptoms of the individual and cannot be accomplished by the patient taking drugs at his own home—even 'the most approved prescriptions of the most prominent physicians of all the world'."

We have brought this matter to the notice of the Association in order that you may be warned of the use that over-interested business people are trying to make of your exceptional positions, and to remind you that according to the standards of all scientific medical bodies, the use of secret formulæ is considered unethical and immoral, and particularly is this so of remedies which claim to do the impossible.

A CORRECTION.

Dr. Maxwell, chairman of the Research Committee, desires us to add to the report published in our July issue that, on review of the subject, Dr. Whyte finds Necator americanus among his "Duodenale" cases. The moral of this is that we should all take pains to differentiate the two worms in order that their relative distribution may be correctly noted. Up to the present time Dr. Maxwell's own station in Formosa, though wallowing in Ankylostomiasis, has not yet satisfied him of the presence of Necator americanus in Formosa.

DELAYED PAPERS.

It has probably "dwindled" upon the mentality of the Association that the JOURNAL has not been hard up for material during the last twelve months, and that the publication of excellent papers has been delayed in consequence. We would emphasize that this is altogether a healthy state of affairs. In order to arrange our issues with symmetry and harmony, as well as to be assured of full issues, it is essential that the Editors' supply should be comparatively ample all the time. We therefore desire to express our delight in the present condition of affairs and rather than have our contributors discouraged, beg them to continue their literary

support with increasing regularity and interest. The fact that a paper is delayed in publication never signifies that it will not appear later on in its own fitting place. Occasionally a particular paper, as, for example, a committee's report, demands instant publication. And please remember the long interval between issues. We have also lately heard of an excellent paper, with photographs, that was lost in the Chinese mail. Fortunately a copy of the same has been obtained. If you do not receive a postcard acknowledging any particular contribution within a reasonable time, please invariably dig us up on the subject.

ASSOCIATION NOTES.

BRANCHES OF THE C. M. M. A.

Central China Branch:—Dr. J. G. Cormack. Hankow, Secretary.
Kuling Branch:— Dr. W. A. Tatchell, Hankow, Secretary.
Manchurian Branch:— Dr. W. Phillips. Newchwang, Secretary.
Korean Branch:— Dr. H. H. Weir, Chemulpo, Korea, Secretary.
Shanghai Branch:— Dr. A. W. Tucker, St. Luke's Hospital, Secretary.

NEW MEMBERS OF THE C. M. M. A.

Joined through the China Medical Journal.

C. HEMAN BARLOW, M.D., N. W. Univ. Med. Sch., Chicago, A. B. M. U., Huchow.
LENA HATFIELD, A.B., M.D., C.P. and S., Chicago, M. E. Mission, Foochow.
OSCAR F. HILLS, M.D., Univ. Penn., Am. Pres., Chefoo.
LI BI CU, M.D., Phila. Woman's M. C., M. E., Ngucheng, via Foochow.

Joined through the Korean Branch:—

J. W. REED, M.D., Meth. Epis. South, Song Do, Korea.

Joined through the Manchurian Branch:—

Mrs. STOBIE, L.R.C.P. and S., Ashiho.
D. T. MUIR, M.B., T'ieling.
J. MCKILLOP YOUNG, L.R.C.P. and S., Ashiho.
MRS. MCKILLOP YOUNG, M.B., Ashiho.
ELIZABETH BEATTY (1907), L.R.C.P. and S., Kuangning.

The E. A. Hackett Medical College Students, Three of the Teachers and Dr. Mary H. Fulton. Canton, China, 1907.

Book Reviews.

Tropical Medicine by Thomas W. Jackson, M.D., Lecturer on Tropical Medicine, Jefferson Medical College, Philadelphia. Lately Captain and Assistant Surgeon, U. S. Volunteers. P. Blakiston's Son & Co, Philadelphia.

The fact that Dr. Jackson has not written his book with special reference to conditions in China does not detract from its value to us as observers of tropical disease. Rather, the fact of newly-organized tropical medicine societies in one country or of journals of tropical medicine in another, serves to remind us that our work will not be done as it used to be, quite apart from the interest and knowledge of scientific medical men in other countries.

The very first section in the book, that on general hygiene, commends itself because of simplicity and applicability to our conditions here. I note with pleasure the support given to linen as a suitable material for undergarments. The section on Measures of Protection against Infection should be learned by heart by everyone.

That the plan of Dr. Jackson is to provide a reliable guide for the laboratory worker as well as for the clinician is evident from the fact that the last part of each chapter contains a section on the laboratory methods of detection and identification, wherever the disease is one in which laboratory study is apt to reveal anything. If any one feels himself to be rusty on the nature of one or another tropical disease, he is cordially referred to the words on etiology to be found in successive chapters, e.g., on Beri-beri and Dysentery. The chapter on Tropical Dysentery is alone worth the cost of the book, and will repay one for careful study. Those who spend much time with the microscope will find food for thought and suggestive points in the laboratory study of the species described in Part II on Animal Parasitic Diseases. While Manson's book on Tropical Diseases still remains indispensable, I should be inclined to put the present volume very close to it as a practical manual that ought to be owned by every medical man in China. The book, as well as others reviewed below, may be ordered through the JOURNAL.

Introduction to Infectious and Parasitic Diseases by Millard Langfeld, A.B., M.B., Professor of Bacteriology and Clinical Medicine, John A. Creighton Medical College, Omaha; Bacteriologist, the Omaha City Board of Health. P. Blakiston's Son & Co., Philadelphia.

This book was primarily written for nurses, but the author was induced to enlarge its scope somewhat in the thought that "if in place of the conventional (seriatim) text-book consideration of infectious and parasitic diseases the fundamental principles which govern all were substituted, knowledge of wider utility would be acquired, and with less effort, because much unimportant detail could be avoided." The reviewer's first thought on approaching a book written with this motive was that it would be hardly the sort of a book we should need in China. On looking it over, however, it has been forcibly suggesting itself to me as very possibly the sort of a book that Chinese students of medicine would be greatly helped by using. If medical students could use such a book as an introduction to a fuller study of medicine, they would be far surer of fundamentals and would find themselves understanding very much more clearly than otherwise, the reasons for principles of hygiene, of asepsis, of care in handling the sick, etc. To medical men no chapter in the book will be of greater importance than the one headed "Avenues of Exit of Infectious Agents and Parasites from the Body". Referring, for instance, to typhoid fever, the author speaks of it as a common disease in which germs make their exit in at least five ways, with a possibility of six, going on to say what we often are inclined to forget, i.e., "Whenever, in the course of an infectious

disease, complications arise in which there is a purulent or other discharge to the exterior, these discharges should be regarded as fresh avenues of exit for the specific micro-organism." There follows, on pages 155 to 165, an important enumeration of the diseases which find exit for their specific germ from one or another avenue in the body. The portals of entry for disease are also well described. It seems likely that this book will fulfil a real need, whether students are taught in English or in Chinese. It ought to be translated.

Medical Diagnosis, a Manual for Students and Practitioners, by Charles Lyman Greene, M.D., Professor of the Theory and Practice of Medicine in the University of Minnesota.

In a recent article on Ideas and Ideals in Medicine, Dr. S. J. Meltzer, head of the Department of physiology and pharmacology of the Rockefeller Institute for Medical Research, New York, has these wise words. . . . "To get the habit of thinking in the practice of medicine is, to my mind, the best means for obtaining a practical end, and if you get the habit the process will be no effort; it would not consume too much of your time, and it will never paralyze your activity; you will know what you may and ought to know of each case, and you will also become aware of the natural limits of your knowledge in each particular instance; all of which is a great aid in deciding on and guiding your activity. You will further know what you can do and have to do, and you will do it quickly, and you will also be clear as to what you ought not to do . . . Habitual thinking is a great aid to proper action and not a hindrance to it. Disease is not like a piece of goods put in a box with a label on it which you need only to read in order to be able to deliver the goods. If you look at it closer, you will find that every disease you have to deal with is a piece of research, and every treatment is an experiment" (*Jour. of the A. M. A.*, 1908, May 16, page 1,582). While any mere manual of medicine is apt to be a temptation to the busy medical man, it may be just the thing he wants by his side in the hospital or dispensary, to be supplemented by fuller reading at home. The book before us is a splendid illustration of what a *handy small* reference book ought to be. It is especially to be commended for chapters like those on "The Outward Signs of Disease" and on "The Analysis of Certain Common Symptoms" Two such chapters are very refreshing, and they only serve to emphasize the words of Dr. Meltzer quoted above, to the effect that we need to give more thought to the cases that pass before us and to regard them as real subjects for investigation. In the chapter on Disease of the Thoracic Viscera, there are many up-to-date suggestions for observation in diagnosis. The book is heartily commended for either the busy medical man, or for the student. It is published by P. Blakiston's Son & Co.

EXTRACTS FROM THE HEALTH OFFICER'S REPORT.

SHANGHAI, 1907.

ARTHUR STANLEY, M.D., B.S., Lond. D. P. H.

The past year was marked by increased mortality from small-pox, cholera, scarlet fever, tuberculosis, and diarrhœal diseases, all of which are preventable. If preventable, it will be asked: why not prevented?

As regards small-pox the means of prevention—vaccination—is in everyone's hands. Shanghai possesses the advantage of having vaccine as a staple product of the Municipal Laboratory, and those who cannot afford to pay doctor's fees may be vaccinated free of charge at the Health Office. Foreigners can scarcely plead ignorance of the advantages of vaccination, while it is satisfactory to be able to record that the Chinese are beginning to appreciate the benefits of vaccination. It is more than likely that within twenty-five years Shanghai will be a well vaccinated city and cases of small-pox, now so numerous and fatal (28 foreign deaths and 863 Chinese deaths during 1907), will be as rare as in the large towns of England.

As regards cholera, typhoid fever, and diarrhœal diseases, prevention is largely a matter of sterile food—an affair chiefly of the kitchen and one second to none in importance for the Shanghai resident, the preventable diseases especially prevalent in Shanghai being mostly caused by infected food. It is necessary for the public to appreciate the fact that most bowel troubles are caused by infected food—food soiled by disease germs. Food, perfectly sound in appearance, is as likely to be infected as food obviously bad. It is necessary, therefore, prior to consumption to sterilise food liable to infection. The word "sterilise" is used in its broadest technical sense—to render free from disease germs. This may be accomplished by cooking, by boiling of milk, by filtering water through a Berkefeld filter, or by using food, such as canned goods and bottled beverages of good reputation, which are practically sterile when purchased. Fresh fruit can be sufficiently sterilised, without spoiling the flavour, by immersion for a few seconds in boiling water.

The prevention of scarlet fever is perhaps more a public matter than any of the others, requiring early notification, isolation and disinfection for its effectual prevention, such as is impossible under present conditions in Shanghai.

The prevention of tuberculosis, again, is largely a personal matter, dependent on the care with which the victim of consumption keeps himself from infecting others with the bacillus from the lungs by spitting and coughing. There is no doubt that the sanatorium treatment is not only of frequent benefit to the patient but of still greater to the public, and especially to the members of the patient's own household. The chief indirect cause of the great mortality from tuberculosis in Shanghai is overcrowding, everywhere admitted to be the worst of all unhealthy conditions and one that cannot be counterbalanced by other sanitary measures.

The application of individual sanitary measures, in Shanghai as elsewhere, is largely a matter of education. Sanitary science requires to be intelligently popularised. Many people think that if they could only know the name of the right stuff they might save the expense of having a doctor. Except in a few instances, it is more than probable there is no right stuff this side of the veil, curative treatment being mostly a matter of application of the principles of hygiene or of the knife of the surgeon. The diffusion of sanitary knowledge, especially among the Chinese, being an important preventive measure, a new method was tried during the cholera outbreak and has been continued since with success. Fuglemen were employed to recite the Cholera Prevention Notice in the Shanghai

colloquial throghout the settlement to crowds collected by a bell. The idea was suggested by the crowds attracted by the professional story-tellers in the teashops. Since the cessation of cholera a fugleman has recited notices dealing with the prevention of tuberculosis, vaccination and general sanitary measures as occasion arose.

Although Shanghai has so far been free from plague there is nothing in the physical conditions of the place which guarantees permanent immunity. Plague appears able to become endemic under every variety of condition and circumstance. If plague ever became epidemic it is more than likely that it would remain for many years. All the conditions favourable are present—overcrowding, inability to detect the first cases and even to compulsorily isolate them if detected. Plague does not easily spread direct from man to man, but rats have been proved to be the chief means of dissemination, leading to continuance and recrudescence of epidemics. Rats are abundant in Shanghai and a comfortable home is provided for them below the ground floor of nearly every Chinese house in the settlement. Attempts have been made to destroy rats in many places infected or threatened with plague, and large sums of money have been expended without satisfactory result. There is no known effectual method of exterminating rats on a large scale. The only sensible method in this town is to do away with the hollow space below the ground floor of Chinese houses. If this measure were adopted, and it is quite easy of adoption, it is estimated that rats would be diminished by at least 90 per cent., which would make a material difference when plague comes. And it may be noted that an epidemic of plague would result not only in a great sacrifice of life but in diminished trade of the port.

The opium question is one that has an important bearing on public health in Shanghai. In Europe alcoholism is the greatest obstacle to sanitary reform, and the death-rate is more increased by this and its consequent misery in the course of one year than in ten by all the infectious diseases. Drunkenness is practically non-existent in China. Opium-smoking is perhaps the equivalent in China of alcoholism, the sedative effect of opium being more in keeping with the oriental character than the temporary mental and physical excitement produced by alcohol. But in comparison with alcohol the evil wrought by opium is trivial. While alcohol causes disease of most of the organs of the body and is one of the common causes of insanity, opium scarcely produces any changes that can be recognised post mortem.

Cholera broke out during the summer in Li Hongkew, one of the many insanitary places which border on the settlement. These grossly insanitary places, just beyond the boundary, are a standing menace to public health and show the necessity for an extension of the settlement for the purpose of sanitary safety. A clear interval of at least a mile should be left between the thickly populated parts of the settlement and the boundary. For the preservation of public health it is advisable to include by a wide sweep of the boundary line those most insanitary places beyond the back of Hongkew. A line from the most northern bend of the Soochow Creek to where the Yangtsepoo Creek joins the present boundary, to include the Hongkew Recreation Ground, is essential for sanitary safety.

PUBLIC HEALTH MEASURES NEEDED.

A new Land Regulation dealing with Public Health measures generally.
A Residence for Municipal Nurses.
A Sanatorium for Chinese Consumptives.
Completion of the Municipal Hospital for Infectious Diseases.
A Vaccination League among the Chinese.

VITAL STATISTICS.

The Foreign Population of the Settlement North of the Yangkingpang, including the outside roads and Pootung, at the last census taken on October 14, 1905, was 11,497, and consisted of 5,728 men, 3,270 women and 2,499 children. The

foreign shipping population, which numbered 2,510 was not included. The foreign population for the middle of 1907 is calculated at 13,700. The census of the foreign population taken at each quinquennial period since 1870 shows the following expansion : 1,666. 1,673, 2,197, 3,673, 3,821, 4,684, 6,774, 11,497.

The Native Population on October 14, 1905, was 452,716, and consisted of 212,517 men, 118,432 women and 121,767 children. The Chinese population for the middle of 1907 is calculated at 510,000. The census of the Chinese population taken at each quinquennial period since 1870 shows roughly the following expansions : 75,000, 96,0000, 108,000. 126,000, 168,000, 241,000, 345,000, 452,000.

Death-rate among the Resident Foreign Population.—During the year 1907 the total corrected number of deaths registered among foreigners, including non-Chinese Asiatics, was 328; of this number 245 occurred among the resident population.

Six months spent continuously in Shanghai is taken to constitute residence as in former reports. As the non-resident population is a variable and indeterminate factor, the deaths in this category are eliminated in the calculation of the death-rate. The death rate per thousand per annum, therefore, calculated from 245 deaths occurring amongst the resident foreign population of 13,700, is 17.9, as against 12 1 in 1906. This death-rate is hardly comparable with that of previous years, 73 deaths among Japanese being reported, as against 13 in the previous year. This has been due to the kind co-operation of the Consul-General for Japan, who now furnishes returns of all deaths occurring in Shanghai among Japanese subjects. The deaths of 92 children (persons under 15) have been registered, as against 37 last year; of the deaths among adults, 107 were men and 46 women; of children, 47 were boys and 45 girls. The mean age at death among the adult resident population was 39.9.

Small-pox, the most obviously preventable of all diseases, still kills in that section of the foreign community which neglects vaccination.

There was a sharp outbreak of cholera in August and September.

Typhoid fever shows a decrease on last year's figures.

The reduction in the mortality from diphtheria may be accounted for by the early and more general treatment by antitoxin, which is now produced in the Municipal Laboratory.

Scarlet fever, which killed so many in 1902, appears likely to linger among the community.

Tuberculosis heads the list of fatal diseases both among foreigners and natives and calls attention to the overcrowding which is so apparent in the settlement.

Alcohol—that comfortable poison—has been responsible for the death of eleven foreigners during the year.

Lobar pneumonia, which five years ago assumed almost epidemic proportions, caused four deaths.

Dysentery and malaria continue of mild type.

Plague has been kept at bay.

There were three suicides among foreign residents during the year.

Among the non-resident population the chief causes of death were typhoid fever, tuberculosis, and drowning.

Death-rate among the Native Population.—10,217 deaths amongst the Chinese have been reported, compared with 5,689, 6,443 and 10,801 in the three previous years.

The death-rate per thousand per annum is 20.00. There were 863 deaths from small-pox and 960 from tuberculosis, as against 29 and 1,000 respectively last year; 655 deaths were caused by cholera. Of the deaths, 6,073 were male and 4,144 female. The deaths of 3,999 children (persons under 15) have been registered; of these, 2,059 were boys and 1,940 girls.

Reports of Local Branches.

KOREA M. M. A., CENTRAL DISTRICT.

The seventh meeting was held at Dr. Scranton's office on June 12th, at 2.30. Dr. Hirst in the chair.

Present:—Members: Drs. Avison, Cutler, Ernsberger, Hirst, Reid, Reed, Scranton, Weir. Visitors: Drs. H. Y. Kim and Esther K. Park. Trained Nurses: Misses Burpee, Morrison and Shields.

The minutes of the sixth meeting were read in part and agreed to and ordered to be completed.

Members of the K. M. M. A. at long distances from Seoul having asked for copies of the minutes in order to be kept in touch with the proceedings of the central district meetings, therefore Dr. J. W. Reed was appointed to present a plan for publishing the minutes.

The next meeting was arranged for the same time and place on July 14th; the chair to be taken by Dr. J. W. Reed.

A paper was read by Dr. Avison on the subject of Hypnotism.

Notes taken during the reading of the paper:—

There is a subconscious self or subjective mind. Events are ineffacibly fixed in the mind, though they may be temporally forgotten. The subjective mind has better reasoning power than the objective, as is shown by what is called intuition, and deduces correctly from the premises presented to it, but does not consider the truth of the premises. Normally the objective mind gets impressions through the senses and corrects the false results arrived at by the subjective mind when reasoning from false premises. The objective mind exercises the will and thus controls the subjective, which can act by itself when instructed by the objective. The various organs of the body act thus. Different characteristics and dispositions of persons are probably due to varying activities of these two minds. Perversion of either may lead to insanity. The present thought causes the immediate action.

In the hypnotic state the objective mind is at rest and the subjective mind accepts and acts on any premises presented to it, being without control.

How to obtain the hypnotic state. It can generally be done by anyone for themselves and is rarely induced by anyone else. There is much unconscious autohypnotism in ordinary life. It always depends mostly on the patient and the operator merely helps the natural process and arranges conditions favourable for the patient to act in. Skill consists in knowing how to arrange. Probably every one can be hypnotised if the right conditions can be found.

The possibility of being hypnotised does not depend on the intellectual capacity of the patient. Probably every one can operate and all do so at times unconsciously. Methods are most varied and almost anyone will do for routine.

Some people can only be got as far as to be soothed; all have a limit which they will not pass due to their previous impressions and any attempt to pass it generally wakes them.

Waking is generally quite easy; the patient is said to wake before long if left alone. The after-condition depends on the suggestions made during hypnosis.

Functional conditions can be thus cured and organic disease sometimes.

Dr. Avison then gave a demonstration on Dr. Kim, and a free discussion followed, bringing out the above points more clearly.

The meeting asked Dr. Avison to convey greetings to Dr. Ludlow, our honorary member.

Adjourned with prayer by Dr. Avison.

Note.—Subject for next meeting (July 14th) was decided at the May meeting: "Instruction in Midwifery," by Dr. Emma Ernsberger.

HANKOW BRANCH, C. M. M. A.

On May 27th, this Association held its 140th meeting.

Besides the doctors, nurses and those who share in any way the work of the hospital were invited to be present at this "Open Meeting".

Dr. MacWillie presided; reports were given on the cases shown at last meeting and two new cases were shown. One of very special interest was the case of a woman where a mole on the arm had within the past year grown enormously so that the arm down to below elbow and all the shoulder and left breast were covered with deeply pigmented skin, the tissues had swollen or grown till the mass measured 31 inches around the axilla. There was a distinct increase of temperature in tumour mass and pain along the line of ulnar nerve. The consistency of the tumour was firm and at one place the skin showed a tendency to break down.

The woman's general appearance was against the tumour being very malignant; she said herself that she noticed an increase in growth from day to day.

Two opinions were given as to the nature of the growth: one that the tumour was a melanotic sarcoma, the other that it was an angioma.

The line of pigmentation was sharp and well defined.

The second case shown was one of a recurrent fungating growth at the outer side of right knee. Operation had been attempted twice and a good cicatrization obtained after each operation, but later recrudescence had taken place, in the shape of a fungating tumour, the size of a walnut.

The young man look somewhat anæmic.

Hereditary syphilis was suggested as the cause, but a number present thought the lesion to be one of recurrent sarcoma. Under the circumstances K. I. was to be prescribed for some time and the case reported on later.

After these cases had been discussed Dr. Huntley read a paper on "The Missionary Side of Our Work." It was a paper of much interest and will probably appear in the JOURNAL.

Many helpful suggestions were given in the discussion that followed as to the method of carrying on evangelistic work in our hospitals, such as the use of lantern pictures, or otherwise to tell the story of Christ's life.

Several emphasized the need of evangelists to follow up the patients who have shown interest, by visiting their homes.

Not *plans* but *carrying out* of plans was laid stress on. Others felt that the *one great need* was to so embue our assistants with the spirit of Christ that the "atmosphere" of the hospital would be a witness to the power of Christ; to this end it was urged that more time be given to teaching and praying with our helpers.

All agreed there was a danger in our efforts to attain medical efficiency we might easily become spiritually negligent.

Several emphasized the need of the preaching in our ward services following a *definite* plan, so that each month an outline of Christ's life and teaching might be given. Topics taken at random would not likely leave a clear impression on the patient's mind as to what Christianity is.

One doctor deprecated using miracles as texts to preach from, as the patients were apt to draw comparisons between Christ's healing with *a word* such diseases as blindness, and the ordinary doctor helplessness before such cases.

All felt the discussion had been a most profitable one, and the suggestions offered will probably lead to some more efficient work in coming days.

No meetings will be held during the next three months, but we shall hope to resume again in October. Meantime the larger meetings at Kuling will serve to keep us up to our best efforts to make medical missionary service the glory of the Church.

J. G. CORMACK, Sec'y.

MANCHURIAN BRANCH OF C. M. M. A.

The Branch held four meetings during the annual conference of the Scotch and Irish Missions at Newchwang, May 26th to June 9th, 1908. Owing to press of other gatherings it was found necessary to meet at 8 a.m., though with committee and Council meetings running up to midnight, this was not always easy.

The first meeting, Dr. J. A. Greig, Kirin, in the chair, was routine, being largely occupied with the reports and discussion on the scheme for training hospital assistants. It was reported that 28 hospital dispensers from all over the province had attended a six weeks' course of lectures at Mukden on elementary chemistry, physiology and anatomy. It was also reported that examinations were held at the end of the course, and the lists were presented.

Dr. Greig, Kirin, presented a report on the purchase of drugs and supplies. He had obtained quotations from a number of leading firms, which showed very considerable differences of price, and made it plain that it would be very advantageous to combine for the sake of discounts promised. The members agreed to do this, subject to the approval of their Boards.

At the second meeting, Miss E. L. Starmer, M.B., Mukden, read a paper on Nursing in our Manchurian Hospitals. Up to the present no foreign trained nurses have had any plan in Manchuria, and the discussion which followed showed that some members were doubtful of the advisibility of their introduction, chiefly on grounds of Chinese social customs.

Eventually, however, the Branch approved of the general principle of having European nurses to act as lady superintendents, who shall not at present be expected to render any personal services in men's wards.

The third meeting was mainly occupied with a paper from Dr. R. J. Gordon, K'wanch'êugtzŭ, on Hospital "Heating," and one from Dr. W. Phillips, Newchwang, on "Some Cases of 麻木."

At the last meeting, on June 6th, after arranging various items of business, the members heard and discussed a paper by Dr. J. A. Greig, Kirin, on "The Treatment of Tubercular Glands"—an ever present problem to most of us, and which led to very free expression of opinion, ranging in practise from the member who advises his patients to go to the country to the member who operates on every suitable case.

Isolated as most of us are for the greater part of the year, these, the first clinical meetings which this Branch has been able to arrange, were generally felt to be most beneficial and enjoyable, and we hope to get up a similar series for next year.

WALTER PHILLIPS, M.B.,
Secretary.

Correspondence.

SHANGHAI, July 14th, 1908.

DEAR DOCTOR: In the June No. of *Knowledge and Scientific News* I find the accompanying article; thinking you may not have seen it I pass it on to you. I wonder if this is the thing of which we have heard lately as a cure for opium smoking; if so, it appears to be as bad a remedy as morphia.

Sincerely yours,

J. E. CARDWELL.

AN OPIUM SUBSTITUTE.

The Malay Drug—not merely useless but worse.

The leaves of an indigenous tree, Poko biak (Mitragyna speciosa, Korth), are stated in the *Journal of Federated Malay States Museums* to be used in Malaya as a substitute for opium. It is a medium sized tree with large leaves and balls of greenish white flowers. It is widely distributed in Perak, and occurs in the jungle and is also planted by the natives in and around villages.

The drug is prepared in two distinct ways. In the first the leaves are dried in the sun until they become crisp, when they are reduced to powder by rubbing between the hands; the ribs and veins are removed and the powder stored for use. The dose is about 136 grains. The powder is mixed with cold water and the whole drunk, or an infusion is made with hot water and is taken like tea. It is usual to take it twice a day before meals.

In the second method of preparation the leaves are dried in the sun and then boiled in water to form an infusion. This is strained and the clear filtrate evaporated to a syrup. In this condition it can be kept for a long time. The syrup is mixed with hot water before taking. The dose is 5.83 grains. Some people just put it on the tongue and wash it down with a drink of water.

The extract is also smoked, after being intimately mixed with the finely shreded leaves of the Palas palm (Licuala paludosa). The mixture forms a sticky, fibrous brown mass.

It is a much worse form of drug habit than opium smoking; the effects on its habitual devotees being far more deleterious.

The use of the leaves has previously been erroneously described in this country as a remedy for the opium habit.

EDITOR OF JOURNAL:

Our Chinese Graduates.

SIR: It seems to me that your editorial note on the question of Chinese membership in the Association is on the right line. But I fear that I fail to understand one point. I presume that the graduates you refer to in the note have a *right* to practise medicine *in America*, and that their degrees are granted by one of the RECOGNIZED American universities. That being so of course they are eligible for membership. [Yes.—ED.]

As to the graduates of the Peking and other recognized *bonâ fide* schools, it seems to me that if the Chinese government definitely recognizes such by appointing government assessors and they are true medical missionaries, not merely in the employ of a medical missionary, they should be admitted.

Undoubtedly a register of such schools should be kept. Is there any British university in China? I think not. But does not your

concluding sentence rather clash with the main purport of the letter? If a man or woman obtains national (governmental) recognition and takes his degree at one of the recognized schools of medicine, we have nothing to do with the question of where he took his course.

I am, yours faithfully,

J. PRESTON MAXWELL.

YUNG CHUN, June 9th.

EDITORS OF MEDICAL JOURNAL.

The Right and the Left Hand of Rev. Foster.

DEAR SIRS: I have just taken up by chance a copy of the MEDICAL JOURNAL for May, and I received something like an electric shock on reading (p. 210) the announcement that the new and beautiful little chapel of the Hiao-kan Leper Asylum was *my* gift! It may be that the greater part of the fund for building it came through me as a channel, but the contributors were not few, and the sums each gave were not small; by far the largest contribution, however, was sent from England by some one who was never in China. Any contribution I made was only a fraction of that in amount. Please make this personal explanation in the next issue of the JOURNAL for me. My friend, Dr. Fowler, by his skill and thoroughness as an architect and builder, made the building what it is and that at a comparatively small cost.

Yours faithfully,

ARNOLD FOSTER.

L. M. S., SHANGHAI, June 23rd.

Take Note and write a Check.

The time for publishing the Annual Report of the National Anti-Opium League in China is drawing near, and so many important edicts, proclamations, leaders and items of news on the subject of opium and its suppression have appeared in the papers during the last few months that we want to add them as an appendix to the Annual Report, print many copies and distribute them widely, not only in China but also in England and America. Funds for this purpose are urgently needed.

W. H. PARK,
Treasurer.

SOOCHOW, June 15th, 1908.

Personal Record.

BIRTH.

AT Siang-yang-fu, Hupeh, 26th May, 1908, to Dr. and Mrs. JOHN SJOQUIST, S. A. M. C., a son.

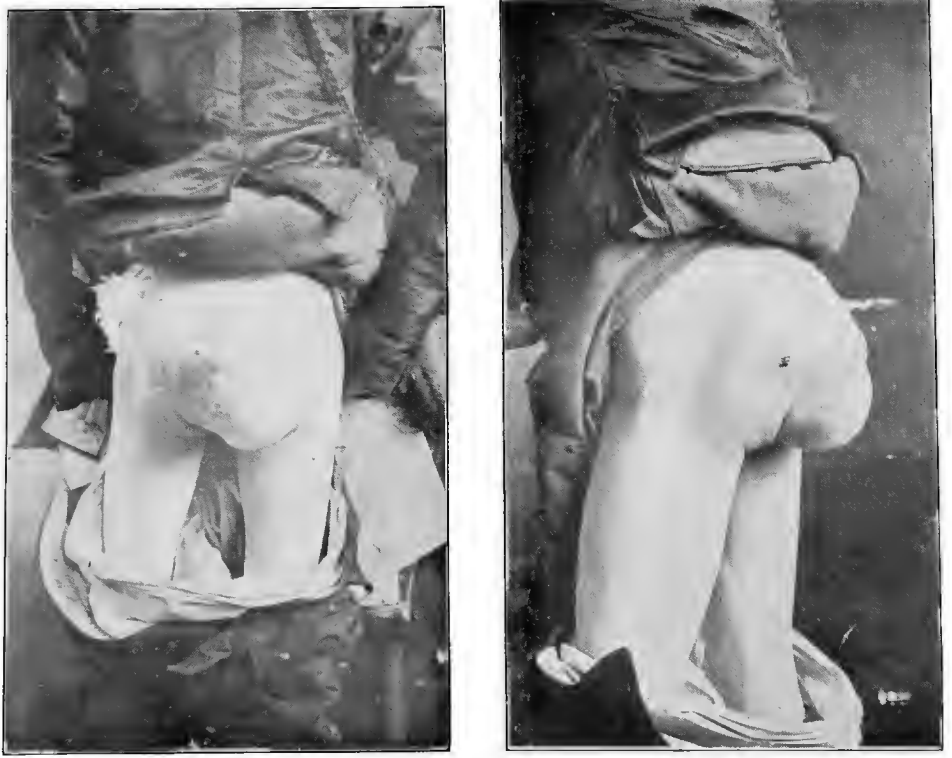
DEATHS.

AT Kuling, 17th August, LEONARD CLAYTON, youngest son of Dr. and Mrs. John MacWillie, A. C. M., Wuchang.

AT Ichang, — August, GEORGE F. STOOKE, L.R.C.P., Ch. of Scotland Mission, of cholera.

ARRIVAL.

AT Kiungchow, Hainan, about 10th August, H. M. MCCANDLISS, M.D. (returning).



A POST-RECTAL TUMOUR. (*See page 353.*)

The
China Medical Journal.

VOL. XXII. NOVEMBER, 1908. NO. 6.

Original Communications.

[All copy must be in the hands of the Editors one month before date of publication to insure appearance in the following number. The editors cannot undertake to return manuscripts which are sent to them. A complimentary edition of a dozen reprints of his article will be furnished each contributor. Any number of reprints may be had at reasonable rates if a *written* order for the same accompany the paper.]

INVESTIGATION OF THE CAUSE OF DYSENTERY.*

By R. T. BOOTH, M.B., B.Ch., D.T.M H., Hankow.

My object this afternoon is to put as clearly as I possibly can the present position of the investigation of the causes of dyseutery as far as bacteriology and protozoology have gone in the matter. Much of what I shall say is already known to most if not all of those here, but it is probable that in the discussion which I hope will ensue some further points which I have not had time to put down, or of which I was not aware, will be mentioned.

We must bear in mind all through our meeting this afternoon that dysentery is not a *disease*, but a *symptom*. The word was originally used iu a clinical sense to designate a form of intestinal flux accompanied with pain and tenesmus. The word then came to be used iu an anatomical sense and was applied to any form of ulceration of the large intestine, accompanied with pain and tenesmus and the passing of bloody mucus. On account of this an attempt was made to bring all such diseases under one category, and they were all styled dysentery, and one cause was sought for all the various manifestations.

In our student days the teaching in regard to dysentery was something as follows: "It is probably contagious in the same way as cholera and typhoid, i.e., not directly from man to man, but only through the medium of the dejections by which water or air is contaminated. There is still much to learn about the cause of this disease. Some forms at any rate appear to be due to the Amœba coli which has been discovered in the stools, in the walls of the diseased intestine, in associated hepatic abscess, and in the sputum." Such a statement as this found in Taylor's Medicine may form a starting point for us this

*Paper read before the C. C. M. Association, Hankow, April 15th, 1908.

afternoon. *No definite knowledge as to the cause, but a probable statement that the A. coli may be one of the causes.* We here get a hint that many were beginning to differentiate between the various dysenteries and were seeking no longer a universal cause but for special causes for special forms of the disease. In a Johns Hopkins Hospital Report issued some few years ago the writers say "that it is probable that in the future we must recognise a number of different organisms as the causes of the various forms of dysenteries, for it is impossible that conditions so varying in both their anatomical and clinical aspects, as are the various forms of dysentery, could be due to a single organism, or even a single group of organisms."

The first step in the diffentiation of the disease called dysentery into several diseases was made when in 1859 Lösch discovered the Amœba coli. Little has been added to the description which he gave in those early days. I shall, however, defer the description of this organism until a later period in my paper. Lösch succeeded in infectiug a dog in proof of his contention that the Amœba coli which he fouud in the mucous discharge from a patient with dysenteric symptoms was the cause of the disease. He injected oue or two drachms of infected fæces into the rectum of four dogs. In oue of these dogs he first produced a condition of acute inflammation by injecting croton oil. This case and two others were negative. In the 4th case, however, in which three injections were made on subsequent days the dog became sick for two or three days, lost its appetite and then apparently recovered. On the 8th day, however, a small lump of mucus was passed with otherwise normal fæces, and ou examiuation Amœbæ coli were found. The dog was killed on the 18th day after the last injectiou and the mucous membrane of the large intestine was found to he reddened and swollen and superficially ulcerated in three places.

From this time on many observers found the Amœba coli in undoubted cases of dysentery, but alongside of these discoveries it was showu that the amœba also existed in normal stools, as well as in the stools of patients sufferiug from other bowel diseases, e.g., cholera, typhoid, etc. Some have gone so far as to say that any simple irritation of the intestiual tract favours their development, and one observer has found amœbæ in the loose stools of 10 out of 20 healthy persons to whom he had administered a dose of Carlsbad salts. The appearance of the A. coli in healthy stools after the administration of saline purgatives, is due to the fact that the usual habitat for the A. coli is the upper regions of the colon, and it usually dies out as the fæces become firmer in their passage down the bowel. However when they are

hurried down as by the saline purgative they reach the rectum alive, aud hence appear in the stool. Other species of amœbæ too have been found in healthy stools, e.g., *A. guttula*, *A. oblonga*, *A. spinosa*, *A. diaphana*, *A. vermicularis*, *A. reticularis*. As the result of these discoveries some doubt was not unnaturally cast on the theory that the *A. coli* could be the cause of dysenteric symptoms. It was then urged that even the B. coli commune was known to become virulent under certain couditions, so it was possibly the case with the A. coli. Finally it has been pointed out that dysentery is caused not by the ordinary *A. coli* but by the *A. dysenterica*, which differs from A. coli in some important particulars.

The existence of amœba in the fæces of healthy individuals and in-patients sufferiug from intestinal diseases other than dysentery was thus explained aud the value of such discoveries as contradicting the theory of an amœbic dysentery was considerably weakened. So much so that it is now practically reserved on all hands that whatever may be the causes of other forms of dysentery there is certainly an *Amœbic dysentery* with peculiar and definite diagnostic symptoms.

I intended to give a description of the Amœba coli, but we are all so familiar with it that it would be waste of time to go into details in such a paper as I am trying to give this afternoon. The manner of finding it, of distinguishing it, and of staining it, are matters we are familiar with from our laboratory work. Here it will be sufficient to point the most recent discoveries in connection with it and the evidences adduced in support of the theory that the pathogenic amœba differs very essentially from the uon-pathogenic form A. coli. Schaudinn in 1904 as the result of his work on the amœba came to the conclusion that there was a distinct form which he called the *Entamœba hystolitica* to distinguish it from the non-pathogenic form *Entamœba coli*.

The differences between these two classes of organisms may be briefly stated as follows:—

Entamœba coli.	*Entamœba hystolitica.*
1. Met with in the normal intestine.	1. Met with in cases of dysentery.
2. No well marked distinction between ecto- and endoplasm; the latter, however, stains more deeply.	2. The ectoplasm is always distinct, of hyaline material, more refractive, always sharply defined from the inner zone, stains more deeply.
3. Vacuoles rarely present.	3. Usually contains one or more vacuoles.
4. Red cells, crystals and bacteria rarely included in the cell.	4. Large numbers of red cells, crystals and bacteria are frequently present.

Entamœba coli.	*Entamœba hystolitica.*
5. Nucleus nearly always visible and subcentral in position and stains deeply. It shows a well marked rather thick and very refractile nuclear membrane and contains a nucleus and a large amount of chromatin.	5. The nucleus is usually eccentric in position and indistinct, stains only feebly, has little chromation and no marked nuclear membrane.
6. Motility very sluggish.	6. Motility more marked and definite.
7. Multiplies by simple fission and spore formation. The latter is preceded by reduction in size, by division of the nucleus, and then conjugation of the daughter nuclei takes place, followed by mitotic division and 8 daughter nuclei result; the protoplasm finally divides into 8 and so 8 amœbulæ are formed.	7. Regular nuclear division is not observed. The chromatin is broken up and the remnant of the nucleus is expelled and the protoplasm then arranges itself around the fractions of chromatin in small spherical masses. Schaudinn has shown that when these spores are given to cats they produce signs and symptoms of dysentery.

Schaudinn dried a small quantity of fæces from an undoubted case of dysentery in air and satisfied himself microscopically that it contained no cysts of A. coli, but only the small brown spores of E. hystolitica. The cover glasses were then removed from the slides actually examined and the fæces washed off in about one c. c. of sterile water and administered to a young cat, whose stools had been proved to be free from amœbæ. Three days later the cat began to pass slimy stools streaked with blood. These were found to be swarming with E. hystolitica. Next day the animal died of dysentery. The necropsy showed characteristic ulceration of the large intestine with crowds of amœbæ in all stages of penetration into the intestinal wall. Schaudinn administered large quantities of the fæces of this cat to another, but it remained healthy. He then gave a small quantity of the dried fæces first used, and within six days amœbæ appeared in the stools. This cat, which was older and stronger than the first one, developed dysentery and died in about a fortnight. From this experiment it would appear that amœbæ taken by the mouth appear to be harmless, and that it is to the dried up cyst containing fæces present in dust and water that we must look for the propagation of dysentery.

Although some observers have failed to confirm Schaudinn's statements as tabulated above, others have done so and in addition Vedder has shown that the manner in which Musgrave and Clegg carried out their experiments to disprove Schaudinn's theory, are not altogether reliable (*J. T. M.*, June, 1907). Some years before Schaudinn published his results Goldsmith drew attention to greenish bodies which are found in the fæces aud in the amœbæ themselves. He pointed out that 1. these bodies are usually seen singly and never seen in rouleaux; 2. that they are about the size of a r. b. c., but vary in size and shape;

3. they are distinctly green in color with a distinct capsule, but only a questionable nucleus; 4. they are flat or biconvex; 5. and are usually within the edge of cell masses; 6. in liver abscess they are in the discharge and also in the amœbæ; 7. they possess slight amœboid movement. He regards these as products of the amœbæ, as he has seen them discharged from them, and they are present for days in the discharge of the liver abscess, whereas r. b. c. are absent. Their development is seen on careful watching, and amœboid movement is shown by changes in form. The green body enlarges and loses its distinct green colour and the nucleus becomes evident, granules and vacuoles then appearing, and when it is about twice the size of a lymph cell it becomes amœboid, and when it is full grown the greenish bodies make their appearance. He also pointed out that amœbæ disappear from the fæces about 24 hours after the stools are passed, but that these greenish bodies do not.

I cannot say what confidence we can put in such a description, but reading it in the light of Schaudinn's subsequent discoveries in relation to the difference in development between the *E. coli* and *E. hystolitica* it may be that these greenish bodies are the spores of the latter, which are very resistant and develop when swallowed.

As I said above we can, I think, take it as certain that *E. hystolitica* is one of the causes of dysentery and the especial cause of *amœbic* or relapsing dysentery.

Recent discoveries have also pointed to the fact that the *E. hystolitica* is not the only protozoal organism which can give rise to dysenteric symptoms. The various other protozoa to which such specific action has been attributed are:

1. *Balantidium coli:* this is a small ciliated infusorian measuring 0.07 to 0.1 mm. by 0.05 to 0.07 mm. It reproduces by fission, budding and conjugation. Occasionally losing its cilia it becomes encysted. It is not known how it reaches the human intestine, but as it is a common parasite in the pig, it may be that it is communicated by that animal.

Strong has collected from other sources as well as his own experience quite a number of cases of this infection, which produced a chronic type of the disease with a mortality of about 30 per cent. Generally only one or two are found, but occasionally as many as twenty or thirty may be found in each field of the microscope. Strong demonstrated the *Balantidium coli* not only in the exudate found p. m. on the surface of the bowel, but also congregated in large numbers in the follicles and imbedded in the tissues forming the base of the ulcerations, including submucosa and muscular coat and even in the lumen of blood vessels and lymphatics.

2. *Cercomonas hominis.*—This parasite belongs to the Flagellata (mastigophora). It is one of the cercomonadidæ which are characterised by the possession of one flagellum at the anterior end without any undulating membrane. Cercomonas hominis is pear-shaped, elongated to a point posteriorly. It is from 0.010 to 0.012 mm. in length, and the flagellum is twice as long as the body. The nucleus is scarcely visible. That it is a parasite of the human intestine is undoubted, and its presence has been demonstrated in cases of intestinal flux, but as to whether it is really the cause I can find no definite proof.

3. The parasite of kala azar has also been found to produce a dysentery and the malarial protozoa has been found filling the intestinal vessels in cases of undoubted dysentery. (Specimen shown.)

Before going on to describe the important bacillar form of dysentery and the various bacilli credited with being the cause, I must refer for a moment to another class of organisms higher in the scale of life which produce symptoms which it is very difficult to distinguish from the ordinary dysenteries which we meet. I refer to what Manson in his last edition calls *Verminous dysenteries*, viz., those produced by

1. *Schistostomum japonicum.*
2. *S. hæmatobium.*
3. *Œsophagostomum brumpti.*
4. *Rhabdomena intestinale* (Strong).

Since Dr. Logan first discovered the S. japonicum as occurring in China the presence of this organism, as shown by its ova in the stools of patients, has been proved to be very common in Central China at least. Logan has found it constantly in the northern part of Hunan. Taylor then found it in the province of Nganhuei. Booth and others subsequently found it in Hupeh, and recently Peake has shown its presence in South Hunan. In many of Logan's cases and in several of my own the prominent symptoms of a dysentery were present and in some cases no treatment was of avail.

The *Schist. hæmotobium* or rather the *Schist. mansoni* as it should be called, i.e., the *lateral-spined egg schistostomum*, whose habitat is the bowel, also produces symptoms allied to dysentery. Quite recently at a meeting of the Society of Tropical Medicine which meets in London, Sambon read a very interesting paper, in which he dealt with this *lateral-spined schistostomum* and said that we must no longer regard it as a mutilated or aborted ovum of the *Schistostomum hæmotobium*, but rather as a distinct species to which he gave the name *Schistostomum mansoni* in honour of Sir Patrick Manson, who some years ago put forward the theory that the two were distinct.

4. One other form of verminous dysentery has been reported by Strong of Manila. This case was due to infection by Rhabdomena intestinale. Manson in his latest edition does not regard this parasite as of any pathological significance. In Strong's case it was the only parasite present.

We shall turn now to the other great divisiou of the cause of dysenteric symptoms, viz., the microorganismal. Under this head we find that during recent years quite a number of bacilli and cocci have been isolated as the alleged causes of dysentery. I shall first name them and then pass on to consider the more important, especially those which seems to be conclusively proved to be the immediate causes.

Cocci. (1). Various pyogenic cocci have been credited with giving rise to dysentery, but it is now generally believed that the part they play is but subsidiary.

(2). Durham's Micrococcus.—Durham has described an exceedingly minute micrococcus—so minute that it passed through a Berkfeld filter—which he separated from the blood, liver, spleen, kidney, and bile in seven cases of asylum dysentery. The investigations, however, are so far incomplete, but Manson believes that there are some grounds for supposing that this microorganism may turn out to be the germ of at least one variety of the very fatal type of dysentery, euphemistically called "colitis," which is the scourge and disgrace of lunatic asylums. Should this be so, the fact that the orgauism occurs in the blood and organs, points to the conclusion that the dysenteric lesiou must be regarded as symptomatic of a general infection.

Bacilli.—Under the head of bacilli a good number of organisms have been described from time to time.

(1). *B. coli com.*—Celli and Fioca believed that the ordinary B. coli com. in certain environments becomes decidedly pathogenic and sets up an undoubted dysentery. The presence of other bacteria, whether streptococci or others, produces a change in the B. coli com. by which it acquires the power of excreting a specific toxin, and it retains this power on being transferred from one person to another. The toxin they allege can be precipitated with alcohol from cultures and has the property of giving rise to dysentery when administered by the mouth, anus, or hypodermically.

(2). However since the discovery of the *B. dys.* by Shiga, Celli has altered his opinion and believes the two to be identical.

(3). *B. pyocyaneus* has also been alleged to be the cause of dysentery. Bertrand and Baucher in epidemic dysentery in France and also in chronic dysentery in warm climates isolated this bacillus. Calmette in a case of acute dysentery in Cochiu China found this organism in the stools. In New York in 1898 a very fatal epidemic was traced to infection with this bacillus In these cases pure cultures were found present in the stools.

(4). Shiga's Bacillus. I-II.

(5). Flexner-Harris.

(6). Vaillard's.
(7). Kruse's.
(8). Duval's.
(9). Dantec's Spirillar Dysentery Bac.—Before going back to the other forms mentioned above I may as well get rid of this last. It was found in 1904 in an epidemic of dysentery in Bourdeaux; the disease differed from ordinary bacillar dys. in there being no elevation of temperature and from A. dys., in the liver not being affected. The diagnosis was made by putting a piece of mucous membrane on a slide. On examining this a grey central part is seen surrounded by a transparent white-of-egg margin. When the central part was teased out, stained and washed, bacilli appeared. Cultures on agar developed bacilli which are negative to Gram. It is possible that these may be B. coli commune.
(10). Bacillus Y (Hirs and Ressnele) differs in action on sugars, attacking glucose and manuite, but no effect on dextruce and lactose.
(11). Bacillus "S."

With some minor variations Shiga's No. 1 and No. 2, Flexner's, Harris', Kruse's, Vaillard's, are all evidently varieties of the same bacillus, which is allied to the B. coli com. and B. typhosus. It was thought at first that they were different one from another, but all the latest evideuce goes to prove that they are identical. I shall therefore content myself by giving the description of Shiga No. 1 and point out some of the differences in culture between it and the others as I proceed.

It is a short rod with rounded ends, about 1 to 3 microns in length. It does not form spores. It is motile in recent cultures from stools, but gradually loses its motility in subcultures. It possess from 2 to 6 flagella, which are mostly terminal and are rather thick and short. Vaillard's bacillus is rather shorter, but possesses numerous fine reticulated long and readily seen flagella. Flexner's bacillus is possessed of long thick terminal flagella, and Kruse's has usually only two terminal flagella.

In a growth on nutrient agar it is semi-opaque, but more transparent than typhosus. It is interesting to compare the appearances of agar cultures of coli, typhosus, and dysentery bac. We notice they have the same order of opacity. Thus coli is the most opaque, then comes typhosus, and then dys. It is easy to distingish the three when you have the cultures present. Shiga's No. 2 differs from Shiga's No. 1 in having a peculiar odour. Flexner's, Vaillard's, and Kruse's all possess the same peculiar odour called by the Germans *spermgeruch*. Iu gelatine stab culture Shiga's is like typhosus, except that the film which spreads out from the puncture in the latter is usually absent. Shiga's No. 2 differs from No. 1 in not being visible for 48 hours, and then being only a slight white growth. All these bacilli differ from the Bac. coli com. in not producing indol in a peptone and salt culture

medium. There is also an appreciable discharge of color in the neutral red shake, whereas Bac. coli com. gives a yellow color and developes gas-bubbles.

With Litmus milk the medium becomes faintly acid, but no clot forms.

It is a negative Gram bacillus.

Dorr has pointed out that Shiga's Bac. No. 1 aud 2 produce a truly soluble toxin, while Flexner Harris's does not. He says the poison can be detected in bouillon cultures from the earliest stage and can be extracted from gelose cultures by means of normal saline solution. The degree of toxicity varies with the strain and in bouillon cultures with the alkalinity. The toxin is not excreted by the liver.

It will be seen from the above short comparison that there is little important difference between the various strains of dys. bac.

Chantemesse and Widal dispute Shiga's claim as the discoverer of the Bac. dys., as they say they announced it as early as 1888. It was Shiga, however, who proved that dysentery could be communicated by this bacillus and thoroughly established its identity.

Shiga pointed out—

1. That it occurred in all cases of bacillar dysentery.
2. That it occurred only in dysentery patients and not in healthy people or patients suffering from other bowel complaints.
3. Its occurrence corresponded with the disease.
4. It was found abundantly in the deeper layers of the intestinal wall.
5. It agglutinated only with the blood of dysenteric patients.
6. The bacilli or their toxins produce hæmorrhagic effects.
7. It is killed by heat, and produces inflammatory effects in healthy patients.
8. Pfeiffer's reaction is well developed by convalescent dysentery serum.
9. Serum is prophylactic and curative.

Shiga inoculated himself with an agar cuture killed at 60°c. Severe local symptoms set in, which ended in nine days in an abscess. Ten days after inoculation his blood gave agglutination.

He pointed out that the prognosis of a case depended on the site, and also on the method of treatment.

	Therapeutically.			Serum.		
	Cases.	Deaths.	Percentage.	Cases.	Deaths.	Percentage.
Sigmoid and rectum	62	6	9.7	80	2	2.5
Colon descending	94	49	52.1	90	8	8.8
Colon transverse	4	4	100	5	0	0.0
Colon whole	17	15	88.2	8	6	75.0
Large and small	1	1	100	10	4	40.0

Thus with serum treatment the percentage of deaths in the whole series is 10.3 as compared with 40.3 in those treated with ordinary methods.

"The above table goes to show that the prognosis depends upon the localisation of the dysentery. When the disease is confined to the rectum or the sigmoid flexure the prognosis is favourable. When it rises to the transverse colon, the ascending colon or the small intestine, the prognosis is very unfavourable. The higher in the intestinal tract the seat of the trouble, the more guarded must the prognosis be. The first principle in treating dysentery therefore is to prevent the upward spread of the inflammatory process by means of purgatives and enemata.

"Symptoms of involvement of the nervous system and other signs of toxæmia do not, as a rule, appear until the upper portion of the large bowel or the small intestine itself are attacked. These nervous manifestations are of grave significance, for such cases generally end fatally. But even under such conditions the serum treatment is not without some beneficial effects; it is at any rate more efficacious than drug treatment, as reference to the following tables will show.

Symptoms.	Drug Treatment.		Serum Treatment.	
	Patients.	Deaths.	Patients.	Deaths.
Nervous symptoms	30	25	22	11
Vomiting	24	20	16	9
Singultus	13	11	9	8
Pain in epigastrium	12	11	15	7
Sub-cutaneous hæmorrhage	8	7	1	1

In the last number of the *Philippine Journal of Science* to hand on Monday, 13th instant (April), Bowman refers to another form of bacillus which he calls Bac. "S" which he isolated from cases of infantile dysentery which prevailed in epidemic form in Manila during the autumn of 1907. The bacillus is somewhat smaller and more delicate than Bac. coli. Its motility is quite marked and is of a wriggling and twisting character. Coagulation is delayed in milk and the litmus present is completely reduced. It forms no gas with lactose-litmus, and there is profuse growth. The idol reaction is negative. Experiments on guinea-pigs and rabbits proved its pathogenicity. However experiments to show the presence of toxins in the filtrate of living cultures were negative. Experiments with suspension of killed cultures were also made, and were negative. Agglutination tests were positive. Bowman's summary and conclusions are as follows: "During the past summer, especially during the months of July and August, several severe cases of infantile dysentery developed in Manila. A bacillus was isolated which

culturally and morphologically resembled in some ways *B. dysenteriæ;* in other *B. coli* and *B. typhosus*. The specific agglutinins developed in animals through inoculation of this bacillus did not react with *B. dys.*, *B. coli*, and *B. typhosus*, but organisms isolated from three other cases of dysentery were agglutinated in high dilution; each by the specific serum of the other. Serum from one patient agglutinated the bacillus isolated from the same patient, yet did not agglutinate other organisms from the same patient. From the above observations and a search through the literature we are led to believe that the bacillus isolated has not hitherto been described as one of the exciting factors in dysentery. The specific characters of the serum of one of these cases and of that from rabbits immunised against Bac. "S" seems to show conclusively that this bacillus was the cause of the epidemic of infantile dysentery which has been described."

As far as I can gather there seems to be some difference of opinion as to the relation of bacillar dysentery to liver abscess. Liver abscess is usually associated with the amœbic type of dysentery, but while most observers say that you never get liver abscess with Bac. dysentery (amongst these is Shiga), others say that it occasionally occurs. Morgenroth writing in 1904 says he believes that liver abscess occurs independently of the presence of amœbæ, and also considers that liver abscess occurs more frequently in connection with Flexner's than with Shiga's Bac. dys.

It will be interesting for a few moments to consider some of the differences between the two main forms of dysentery, viz., *amœbic* and *bacillar* without, however, going into details.

They are only similar in one particular and that is the *site* affected, viz., the colon. With the exception of Morgenroth, whom I have quoted above, it is generally believed that Bacillar dysentery leaves no other lesions behind save its effect on the mucous membrane of the colon and enlargement of the neighboring glands, e.g., in acute cases where death has occurred on the 4th to 7th day the mucous membrane of the large intestine is swollen, of a deep red colour, and presents elevated coarse corrugations and folds. Spots of hæmorrhages occur scattered through the swollen mucosa. Over the surface usually is a superficial necrotic layer which can be brushed off lightly with the finger. It may be in patches or may be uniform over whole areas. No ulceration; only superficial general necrosis of the mucosa. The solitary follicles are swollen and red. The inflammation may extend through all the coats of the bowel, and the serous coat may be deeply injected. (Osler.)

When we turn to the amœbic form of the disease, however, we find a very different picture. The lesions consist of ulceration produced by preceding infiltration general and local of the submucosa due to œdematous condition and multiplication of the fixed cells of the tissue. They first appear as hemispherical swellings, which ultimately necrose, exposing the infiltrated submucous membrane as a greyish yellow gelatinous mass which at first forms the floor of the ulcers and is finally cast off as a slough (Osler). We thus see that in the amœbic form ulcers are the prominent feature, whereas in the bacillar form it is a general superficial necrosis. Liver abscess is a frequent sequence of the amœbic form and rarely if ever follows the bacillar form.

The blood of patients suffering from bacillar dysentery will agglutinate the bacillus of the corresponding strain. Whereas the blood from a patient with amœbic dysentery will have no effect on any of the bacilli above mentioned. According to Shiga the agglutination appears within two or three weeks of inoculation with the disease, and reaches its highest point during convalescence. Often, however, it is poorly marked in the course of the disease. It is, however, of some value and the blood of all patients suffering from a prolonged attack of diarrhœa should invariably be tested with several strains of the bacillus and the stools subjected to a microscopical examination.

PROPHYLAXIS.

With regard to the prophylaxis of this disease it is held that patients suffering from the disease, whether *amœbic* or *bacillar* in form should be isolated. All clothing should be thoroughly disinfected. I have mentioned in the earlier part of the paper in reference to amœbic dysentery that the spores are very resistant and retain vitality for a long time, and besides we gather from Schaudinn's experiment that spores in water are much more liable to give the disease than even fresh fæces. Quinine is the best desinfectant to use to kill these spores. With regard to bacillar dysentery the organisms too have considerable vitality. They will live on clothing for at least three weeks, and are said to maintain their virulence in damp soil for months. When spread on bread-crumbs, or similar articles of food, they survive for about a week. They are, however, easily destroyed by heat or by weak solutions of perchloride of mercury, or the higher phenols.

The stools of all patients suffering from dysentery should be thoroughly disinfected and if possible incinerated.

One recent investigator thus sums up his conclusions: "In the light of recent work, I submit that all cases of diarrhœa occurring in the

tropics should be treated with the same precautions as if they were manifest cases of dysentery, and in hospital should invariably be isolated and their stools sterilised in some simple form of steriliser or by means of disinfectants."

TREATMENT.

With regard to treatment I do not intend to say much. The ordinary medicinal treatment is known full well to all here. I shall just point out some important principles of treatment without going into details of methods. The first important thing to bear in mind is that REST is an absolute essential, whether it is the *amœbic* or *bacillar* form of dysentery we are called on to treat. *Rest in bed for the body and rest for bowel* as well. Therefore give the bowel little to do, and let that little be easily done. Hence the importance of the second principle. *Easily assimilable and at the same time nourishing food* and as little as possible. The third important factor is to keep the patient *warm* and avoid all risk of chill.

Medicinal treatment divides itself under two divisions. Medicines by *the mouth* and medicines *per rectum*. With reference to these I need say nothing. We are all familiar with the ipecac treatment, the saline treatment, the antiseptic treatment, etc. I merely wish to add that quinine enemata are a specific in amœbic dys. and I have found that tannic acid is also of great use.

Surgical Treatment.—In the last few years it has been advocated that a modified colotomy should be performed in Chr. dys. The method is simply to make the ordinary incision in the right iliac region for appendectomy and bring the appendix to the surface and fix it in the abdominal wound. A few days later it can be opened and a catheter put in position, through which the bowel can be flushed out with large quantities of suitable fluid. A tube is placed in the rectum so that distension does not take place.

Serum Treatment.—As one would expect after a bacillus, especially one allied to the typhoid bacillus, had been isolated as the cause of dysentery, attempts have been made to prepare a prophylactic and curative serum. Several such have already been brought before the notice of the profession.

In 1903 Kruse prepared a serum. He experimented on guinea-pigs which he infected and then serated with good results. In man he had only one death in nineteen cases (5.2 per cent.) He contended that "serum therapy modified the severity of the disease, shortened the

duration of the convalescence, and lessened the mortality." Shiga also prepared a serum. On heating it he found that it became inactive, but found that normal horse serum would reinactivate it, and also a much more interesting fact that normal human serum produced a similar result. It is interesting to note that this is the first bactericidal serum which has been found to be activated by man. Patients treated with this serum were rapidly cured, or the condition was markedly ameliorated. In advanced inflammatory states the number of stools was reduced and a cure effected in two or three days.

As pointed out above, in a series of his cases treated with serum as compared with cases treated in the ordinary method, the proportion was 10.3 per cent. to 40.3 per cent. deaths.

In 1907 Vaillard and Dopter produced a curative serum by subcutaneously injecting horses with living cultures and toxines of Shiga's bacillus. In experiments on rabbits the serum possessed preventive powers, but the immunity only lasted ten days. Injected twenty-four hours after inoculation with culture it exercised curative effect, so that it is at once anti-toxic and anti-microbic. They employed this serum as the only curative agent in 96 cases of human dysentery (50 of these were mild, passing 15 to 20 stools a day; 18 were severe, passing 30 to 80 stools a day; 24 were dangerous, passing 80 to 150 stools a day; 4 were looked upon as fatal, passing 150 to 230 a day.) Only one death occurred. The efficacy of the treatment was shown by the following facts:—

1. There was an almost immediate action on the local and general condition. Some hours after injection colic and tenesmus disappeared or diminished, though in the most serious cases the improvement was delayed for 24 to 48 hours. The dejecta ceased to be bloody. The number of stools diminished promptly, and the material became more natural and the general condition improved.

2. Rapidity of the cure. The mild cases were cured in from two to three days. The more severe were cured in from four to six days.

They found the effects were greater the earlier the treatment was adopted. The dose to be administered should be: in mild cases, 20 c.c.; in grave cases, 30 c.c. If not relieved in twenty-four hours repeat the dose. In serious cases 40 to 60 c.c. may be administered and repeated on successive days. If necessary 80 to 100 c.c. may be given.

I have done my best to fulfil my intention of bringing before you the most recent developments in connection with this all-important subject of dysentery, and trust that my efforts have not been altogether in vain. I hope that we shall all try and be a little more scientific in

our diagnosis of the various phases of this complaint which is of so much importance to us who practice in the tropics. Some expression of opinion as to the relative frequency of the various forms would be of advantage to us this afternoon, and also any experiences which you may have had in the most recent methods of treatment.

A POST RECTAL TUMOUR.

By CECIL J. DAVENPORT, F.R.C.S., Shanghai.

The accompanying photograph, taken by Dr. Cousland, clearly depicts a very interesting case seen at the "out-patients," Shantung Road Hospital. Patient, a young man of 24, well nourished and in good health, presented himself for treatment owing to the inconvenience of having such a large swelling on the buttock. Apart from the inconvenience, and the feeling of fullness and aching before defæcation, and the fact that one or two superficial ulcers, caused by native treatment, constantly discharged watery pus, the patient had nothing to complain of.

He said that the tumour began to grow from babyhood.

The points of extreme interest about it were: (1) that he stated his father was similarly affected, (2) a very marked impulse took place on coughing. The whole mass felt like a large protrusion of the bowel, but no part of it could be replaced by pressure.

Examination by rectum showed that the bowel was normal and apparently formed no part of the tumour.

The sacral bone showed no traces of being bifid, though the coccyx was considerably everted and turned to the side. The walls of the tumour for the greater part felt thin and elastic. A thick irregular, oblong plate of bone occupied the posterior wall to the extent of about 4 × 3 inches. Over this plate of bone the skin was thickened and bossy. No hair grew on the skin. Operation was thought inadvisable. The diagnosis lay between a teratoma and a dermoid, the tumour had evidently started from the inside of the pelvis, behind the rectum, within the hollow of the sacrum. I am inclined to think the growth was of the nature of a dermoid.

A CASE OF PELVIC DERMOID OBSTRUCTING LABOUR.

By JAMES L. MAXWELL, M.D., Tainan, Formosa.

B., age 28, multipara, a heavy opium smoker, was admitted to the Tainan hospital on March 2nd, 1903.

Two previous pregnancies: (1) Four years before an easy labour at full term. (2) Two years before, ending in a miscarriage at the 5th month. No evident cause for miscarriage, and convalescence therefrom normal.

Present pregnancy appeared normal up to the last month, during which she suffered from much abdominal pain, for which she could not account. Labour commenced 24 hours before I was asked to see the case; the membranes had ruptured for 12 hours and the pains, good at first, had now become infrequent and weak. An attempt with forceps to extract the child had failed, as also had two attempts to perforate the head! No fœtal movements could be felt or heart sounds heard.

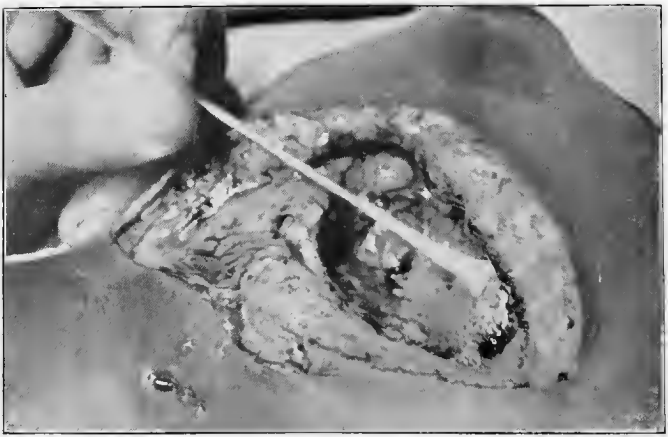
Per vaginam.—Head presenting in the transverse position, face to mother's right, left hand by the side of the head, which was not engaged in the true pelvis. Preventing the descent of the head was a large mass, soft and doughy in Douglas' pouch, pushing the head forwards.

Patient was moved into the hospital and, under chloroform, a trochar was introduced through the posterior wall of the vagina into the swelling, and a small quantity of thick pus escaped through this. The trochar opening was enlarged till the finger could be passed through the opening and a large quantity of dermoid material was thus removed. By pulling on a long lock of the hair, a large mass was brought down, ligatured and cut off. This proved to be a breast-like protuberance, from the nipple of which the lock of hair grew; with this was another mass of tissue in which was imbedded bone and tooth-like masses of cartilage.

As the pains were now beginning to return and all the hair and poultaceous material had been removed, I washed out the cavity with hot lotion and turned my attention to the child.

As the arm was now right down by the head it was decided to extract by internal version, which was easily accomplished. There was no bleeding. The placenta appeared to have been separated from the uterine wall for some time, the child was quite dead. No douche was given. On the third day a vaginal douche was given, as the lochia were a little foul. Convalescence was much interfered with by an attack of

Complete resection of the Sternum, at first dressing.



Resection of Manubrium, at first dressing—Looking from the neck toward the feet. The probe is resting upon the arch of the aorta.

"opium smoker's dysentery." Owing probably to this cause there was a good deal of irregular fever and abdominal tenderness for ten days after delivery. The uterus followed the usual course of involution and was never itself tender to the touch.

Four weeks after delivery I examined the patient and found the vaginal wound healed, but a large mass still present in Douglas' pouch. Patient refused to remain longer in hospital.

On May 4th, 1903, patient was readmitted, complaining of much pain in the pelvic region and irregular fever; she appeared to be in a very weak condition. On examination a large fluctuating mass was felt in Douglas' pouch. This mass could also be felt per abdomen.

Patient was anæsthetised again and an incision was rapidly made in the mid-abdominal line to see if the cyst could possibly be tackled per abdomen. However the bowels were found to be densely adherent all over the cyst, whose actual wall could nowhere be seen. The incision was therefore immediately closed and the operation continued per vaginam. A free incision was made into the posterior vaginal wall and the cyst reopened; a large quantity of pus being evacuated. The cyst was then well washed out and a careful search made for more dermoid material; none, however, could be found. With a sharp uterine curette the whole of the inside wall was then vigorously scraped; great care being taken to reach if possible every corner of the cyst. The edges of the incision were drawn down and stitched to the vulva and a very large drainage tube inserted. The drainage tube was removed after a week and the patient left the hospital on 9th June with only a little thickening of the posterior vaginal wall to mark the site of the cyst. During her second stay in hospital the patient gave up opium, and I saw her a year or so later in perfect health and complaining of no pelvic trouble whatever.

RESECTION OF THE STERNUM.

By W. H. Jefferys, A.M., M.D., Shanghai.

Affections of the sternum seem to make very little impression on medical literature. Among the standard text-books allusions thereto are few and far between. Certain references are made to necrosis, secondary carcinoma, gumma, and so forth; curetment, drainage, etc. are recommended in an indefinite way; but for the surgeon who is looking for help and suggestions, there is little of either. Within five years I have dealt with four cases of necrosis of the sternum: one of the

left sterno-clavicular articulation, cured hy curetment and drainage; one of superficial necrosis of the manuhrium, which left hosipital hefore results could he determined. The two other cases are here reported.

Zi Pah-ling, age 27. Prisoner. Admitted 31st October, 1907, from the Municipal gaol. Patient was sent in by the Health Officer for operation. The history is as follows :—

Ahout six months previously, patient had received several blows from the hutt of a rifle on the upper part of the thorax. There was no marked discomfort at the time of the injury, with the exception of occasional coughing and slight pain over the chest. Three months later a small, fluctnating swelling was noted over the upper part of the sternum. This was incised, hut no pus ohtained. The incision did not heal and a sinus formed. It was afterwards enlarged and pus obtained. On admission two or three small sinuses were leading down to the manuhrium, which was covered with unhealthy-looking skin. Patient had slight expectoration, but no t. b. November 5th a crucial incision was made over the length and hreadth of the manuhrium, which was removed in four or five large necrotic portious. The gladiolus was not involved, nor the clavicles. The posterior periosteum was necrotic aud a large ahscess was found in the superior mediastinum. Four or five table-spoonfuls of necrotic lung tissue were removed from the left side; the cavity was carefully wiped out, and when cleansed the finger could he placed upon the following structures: the ascending and transverse aorta, the innominate and common carotid arteries. Pulsation of the auricles could be distinctly felt, and there was a cavity in the left lung, the size of an apple. This, however, was protected by a granulating wall, so that air did not pass in and out. The entire cavity was packed with gauze, which was changed on the second day, when the photograph was taken. It shows the large wound, but gives little idea of the depth thereof. The costal ends on both sides are visible, and one of the sinuses, which pointed in the root of the neck, is seen. The bright spots iu the depth of the wound are reflections from moist granulatious already springing up on the aorta. Even at this early date the cavity had begun to fill, and showed every sign of doing nicely. On the 16th November an excess of scientific zeal revealed the presence of ankylostomum eggs in the stool, and in order to improve the patient's general condition the following were given :—

7 a.m.	30 grains thymol.
8 a.m.	20 ,, ,,
8:30 a.m.	1 ounce magnesium sulphate.

The patient was taking at the same time a mixture of nux vomica and whiskey t. i. d. Within twelve hours patient developed intense headache, some cyanosis, slight wandering delirium, nausea, and, later on, stupor. These symptoms progressed for four or five days, when the wound began to show signs of glazing and drying, and the patient died on the 26th November, badly cyanosed still and with every sign of meningitis. I attribute the death to the administration of even this reasonable dose of *thymol* in the presence of the amount of alcohol contained in the whiskey mixture, and believe that, except for this accident, I should have to report the successful result of one of the most remarkable surgical conditions I have ever seen.

Tsang Zau-ding, age 23. Farmer. Admitted December 19th, 1907.

History.—About a year and a half previous, on the front of the upper sternum there appeared a moveable tumour about the size of a walnut. Its first manifestation was quite sudden ; no pain or feeling of discomfort. It soon ruptured and discharged its purulent contents, and the surrounding tissues began to show signs of involvement. The skin was unhealthy and glistening, new sinuses developed, and so on. The patient was delicate looking, anæmic, had slight expectoration, but no t-b. On December 20th, under chloroform, a median incision was made the entire length of the sternum, which was completely removed, being found more or less necrotic throughout. The anterior ends of two or three ribs were also removed. Sinuses were found running behind the sternum and leading in various directions, but the posterior periosteum was not broken through. At first, and for several days, great difficulty in respiration manifested itself, until complete abdominal respiration became established. Slowly the cavity filled and the chest collapsed by contraction until the ends of the ribs came together in fibrous scar union. Respiration became entirely abdominal and remained so ; the chest heaving very slightly under effort. Patient's general condition improved immensely; he became plump, with good colour, and other signs of generally improved health. There still remained the sinus apparently from the fourth rib on the right side, which will need later treatment, and possibly a couple of points at the rib ends will also need curetting. But at this time (May 14th, 1908) the patient's condition is excellent and the prospect of a cure is pleasing.

The photograph of Case II was taken also at the first dressing. The lateral extensions of the wound were made to deal with the ends of the ribs.

Whether these cases were tubercular in origin, or otherwise, is not quite clear. The Chinese farmer uses long-handled, heavy tools and may be supposed to press with his chest in the course of his labour in such a way as to bruise the bone. The prisoner has clearly the history of pre-sternal injury. Neither patient showed t. b., though both had coughs and expectoration.

There is no difficulty in the performance of the operation; serious as it is, and in spite of the collapse of the chest following thereon, there is precisely the same indication as in deliberate collapse of the chest produced in extensive resection of the ribs in chronic pleurisy. A necrotic bone is its own indication for removal, and no matter what its site may be, if it can be reached by human means, it is better out than in. I have come to this conclusion with relation to necrosis of the pubis, which I have seen several times and which required extensive removal and was followed by collapse and mobility of the pelvis, but I cannot imagine that a necrotic pubis would by any one be considered better than none. I shall hope to develop this interesting point in a later report on necrosis of the pubis.

THREE INTERESTING CASES. OPERATIONS DONE IN 1898 AND IN 1899. HOPE HOSPITAL, AMOY.

By J. A. Otte, M.D.

Case No. 4,274. Male, age 36. Fibrous epulis involving the whole of the ramus of the lower jaw on the left side and a part of the right side. The tumor filled the cavity of the mouth, pressing the tongue back into the pharynx. It completely prevented mastication and interfered with articulation and deglutition.

On December 24th, chloroform was administered, a laryngotomy performed, and a tracheotomy tube tied in. The pharynx was now filled with a sponge, after which the tumor was removed. After making the usual external incision the right ramus was sawn through with a chain saw about one-half inch in front of the body; the rest of the bone was then dissected with the tumor attached; the left side of the jaw being disarticulated. A thread was then inserted through the tip of the tongue in order to draw it out in case it should fall back. The external wound was sewn up with interrupted catgut sutures, reinforced by four hare-lip pins. The root of the tongue was carefully stitched to the structures back of the chin.

The tumor had completely absorbed the bone where it was attached, except its outer plate. It measured four and a half inches in lateral diameter, four inches in antero-posterior diameter, and was three and a half inches thick. The teeth of the left side had been pushed over and lay on those of the right side.

After the operation it was deemed necessary to inject two quarts of normal saline solution subcutaneously. Rectal alimentation was necessary for two days after the operation. On the second day the tracheotomy tube was removed. The temperature never was above 99. Four days before the end of a month the external wound was entirely healed.

Case No. 6908. Male, age 25. Tumor of the naso-pharynx, probably fibro-sarcoma. History indefinite. Has noticed a tumor in the nose for two years or longer. The tumor presented in the left nostril completely filling it. It completely filled the left nasal fossæ, extending backwards and expanding, completely filled up the naso-pharynx, pushing down the soft palate and interfering with deglutition, respiration, and articulation.

On September 20th, chloroform was administered, tracheotomy performed, and three small sponges pressed down into the pharynx. The sup. max. of the left side was then resected and found to be free from disease. Then the tumor, which had a pedicle about three quarters of an inch in diameter, was removed with a chain ecraseur. After it was torn loose, there was considerable difficulty in delivering the tumor, as it was grasped by the soft palate, and being club-shaped was held as in a vise. There was at this stage a great deal of hemorrhage. By pressing the tumor back it was finally delivered and the hemorrhage stopped. If tracheotomy had not been done, I fear the patient would have lost his life at this stage of the operation. He would have been drowned in his own blood. The tumor arose by a pedicle from the body of the sphenoid. Its attachment was thoroughly cauterized. The recovery was uneventful. The temperature reached one hundred in the axila on the fourth day after the operation. The patient was discharged nineteen days after the operation. Four months and a half after the operation there was no recurrence.

Case No. 8020. Male, age 16. Multilocular Cyst of the Inf. Max.—The patient was a well nourished lad, appearing older than he was. I would have taken him to be at least twenty-two. He had a hard bony tumor, involving the greater portion of the inf. max., viz., the lower part of the right ramus and the whole of the body on both sides up to the insertion of the second molar of the left side. The teeth were in perfect

position, and were all present, except the second bicuspid on the right side, which was wanting. The growth of the tumor was downwards, backward and inward. After removal it was found to be four inches in diameter from right to left, and two inches in diameter through the symphisis, and two and a half inches from above downwards. On the right side of the face was a sinus extending down to the bone, the result of an effort to remove the tumor with caustics. The history was indefinite, but the patient said the tumor had been growing for about two years. There had been no pain, but articulation was becoming indistinct and swallowing difficult. There was no evidence whatever of the tumor being cystic. Indeed, after removal it was found that except from numerous small cysts the size of a pin-head to that of a bean, the whole of the enlarged alveolar process was practically solid, while the rest of the bone was cystic.

On January the 2nd, after a tracheotomy, the tumor was removed together with all of the jaw on both sides, except a small bit near the articulation of one side. On March the fifth, after a slightly protracted recovery, the patient was discharged in good health.

ACHONDROPLASIA.

By Dr. W. E. PLUMMER, Wenchow.

Achondroplasia is a rare disease. In the *B. M. J.* for January 5th, 1907, there are reports of five cases with photos. In the same journal, June 30th, 1906, there is a more detailed account with many particulars not mentioned in the text-books.

The following report is of a patient recently seen in Wenchow. The man was thirty years of age; he came for treatment for his eyes.

Family History.—Mother and four sisters living. The father is dead and also four brothers, who lived from three to five years. All these relations were of a normal size.

Personal History.—The patient was born smaller than the other children. Three years since his eyes inflamed, and immediately after he had gonorrhœa, which lasted for two years.

On Admission.—Intelligence good. Height, 4 ft. 5 inches. Eyeballs prominent. Tension = +1. Vision, R. E. = $\frac{2}{40}$, L. E. = $\frac{1}{40}$; no improvement with glasses, media cloudy, no abnormality of the disc or retina detected. The cornea and iris are normal in appearance.

A CASE OF ACHONDROPLASIA.

CASE FOR DIAGNOSIS.

The following list of the differential characteristics of achondroplasia is taken from the paper already quoted in the *British Medical Journal* for June 30th, 1906 :—

1. A congenital origin.
2. An abnormally large vault to the cranium.
3. Depression of the root of the nose.
4. Prognatbus.
5. Arrested development of the long bones of the extremities, with exaggeration of their normal curves.
6. Normal development of the trunk.
7. Beaded ribs and enlargement of the ends of the long bones.
8. Decentralization of the mid-point of the body, which is invariably and persistently above, and not below the umbilicus.
9. Characteristic appearance of the hands, described by Marie as the main-en-trident.
10. Excess of adipose tissue.
11. Protuberent abdomen.
12. Lordosis.
13. Smooth pliable skin, with abundance of glossy hair in all the ordinary situations.
14. Normal mental condition.
15. A tendency to other congenital malformations, especially high arched palate and inguinal hernia.

In the case now reported most of the characteristics mentioned above can be seen to be present in the photos, and the soft skin, high palate, and normal mental condition were found to he present at the examination. There was no inguinal hernia, and the beading of the ribs was not pronounced.

There is no mention of eye trouhle in the cases recorded in the *B. M. J.*, so that in this patient it is prohahly an accidental complication.

CASE FOR DIAGNOSIS.

By MARGARET PHILLIPS, B.Sc., M.B., Pingyin, Shantung.

In July, 1907, Dr. Jefferys reported in the JOURNAL a case of extensive pustulo-tuberculous ulceration and cicatrization of the epidermis of unknown specificity. I at once remembered having seen at least two cases of the disease during my short stay here (hoth in men), hut the language having hitherto required much attention, I had to wait until another case should come to me. The case reported here presents clinical features closely resembling those of Dr. Jefferys' case, with one or two slight though interesting variations which may make it worth recording.

The patient is a man, aged 40, a cattle dealer in the extreme west of Shantung. In the course of bis occupation he naturally (in China) comes in contact with many diseased animals. He refuses to acknowledge any previous illness, saying that be has always had excellent health. He has never seen a case similar to his own. He is in fairly comfortable circumstances and lives on the ordinary Cbinese diet here—grain (millet, wheat) and vegetables, occasionally meat (though rarely). He is of temperate habits and does not smoke opium. His present condition is good, thongh he is now, and always has been, a somewhat spare subject. He complains now of a slight degree of anorexia aud irregular attacks of pain in the diseased areas of skin.

The disease originated about five years ago as a small red papule on the left shoulder, which broke down and ulcerated, and then began to advance slowly across the chest; the older portions healing as new ones were attacked.

His chest is covered in front witb a continuous area of stellated scar tissue extending from the left supraclavicular region obliquely downwards to the lower costal margin on the right side; the whole of the front of the chest being covered also to a similar point on the left side. The right arm is affected around the elbow joint, above and below it. When the arm hangs by the side the upper line of the diseased area corresponds with that on the chest. Below the elbow the disease completely encircles the arm. There is contraction of tbe elbow to 70°, and the biceps tendon stands out prominently as a thick red cord. There are active centres on the chest, at the left extremity of the affected area, exteuding round towards the back of the cbest, also on the arm at the upper and lower margins of the scar tissue. There are no lesions on the face, or legs, or in any otber situation.

The active lesions consist of large red, slightly raised granulating ulcers, covered with a dry crust consisting of serum and pus with here and tbere slight hæmorrhages. There are no pustules aud no vesicles. No scales are present, and there are no scattered patches. There is no itching, or smarting, and no signs of scratching. There is no tenderness, but attacks of pain in the affected skiu occur irregularly every few days.

The cicatricial tissue is both white and red, slightly raised above tbe normal surface, smooth, sbiny and thin: in some places drawn into fiue creases, in otbers the red raised cords show a keloid teudency. The effect is to produce a reticulated appearauce of the whole of the scarry tissue. I noticed the peculiar slauting depressions tbat Dr. Jefferys referred to. This case seems to differ chiefly in the absence of any

disease on the face aud the reported occurrence of a certain amount of pain, tbough pain in the Chinese is not always a reliahle symptom. A photograph is enclosed, not of mnch use except to show the general aspect of the patient aud the contraction of the right elbow joint. An active lesion is seen on the wrist and a large one on the left side of the chest. The cicatricial tissue, though covering the whole of the front of the chest, is only visihle where keloid ridges are prominent. There is no better camera at present at my disposal, so a nearer view was impossible. I am huilding a hospital and dispensary, and heing without assistance, have no time for hacteriological work. Failing to cure a disease of years at one sitting, the patient has naturally not returned, and it seems difficult to get in touch with him again, though I am still hoping to do so eventnally. I have no suggestions to offer towards identifying the disease, except that the key to the solution probably lies in the study of the etiological factors common to all such cases, especially occupation, sex, habits, and communicability or otherwise of the disease. In the case reported hy Dr. Jefferys it would he interesting and prohahly illuminating to hear the history of the disease in the hushand. I shall note with interest a record of other cases either privately or through the medium of the JOURNAL. Were it only in the investigation of the skin diseases in which China abounds, the medical missionaries of China might find a life work.

[NOTE.—This is evidently the same disease as that reported by me, and I helieve that it represents an entity and that its cause will be found to be a yeast. Dr. Plummer's case, reported in the September issue, is probably the same thing.—W. H. JEFFERYS.]

In Consultation.

LINCOLN, NEB., August 5th, 1908.

DEAR DOCTOR :—On my return from a month's vacation I find two letters of yours awaiting me here.

I am accustomed to use alcohol as a permanent preservative. Formol is apt to deteriorate, unless the bottle is perfectly corked, and I have had better success with alcohol for permanent use. Any specimens of any kind are acceptable. The big picture of the laboratory is particularly attractive. May I ask if you are the gentleman with the *sunburst* on top of his head or the fellow whose modesty almost carried him out of the picture. [Sunburst.—ED.] You see I am anxious to have you identified properly in personal fashion. I wonder if by any possibility you could get me a print of that picture protected by card board so that it would he in a condition for framing. I should be delighted to be able to hang it on the wall of my parasitological laboratory. It would be the cause of the greatest interest to my students. I am enclosing to you a card made by Blanchard, of Paris, from a photograph which was taken at my solicitation in Boston. It is the collection of parasitologists at the International Zoological Congress.

To secure satisfactory results your worms must really be preserved in different fashion. You will find a solution of 70 per cent. alcohol, plus 10 per cent. glycerine, heated to 60° at the time of using altogether the most satisfactory means of preserving nematodes. Under its influence the worm, if not too much tangled up with other specimens, will straighten itself out and make a specimen good enough for a museum. Tapeworms and flukes may be thrown into hot formol, 1 to 10 per cent., and this need not be changed unless they are held for some weeks. In that event a single change is wise on account of the fact that the fluid deteriorates. They may also be well preserved iu a saturated aqueous solution of mercuric chloride, to which has been added approximately 1 per cent. of glacial acetic. In this event they may be transferred to 70 per cent. alcohol any time within two weeks.

We are accustomed to write labels in the carhon ink or drawing ink which is used in making sketches for reproduction hy the ziuc process. After a label is written with this and permitted to dry we find that it is not affected by formol or alcohol.

I am sorry I cannot give you any better information on a hook than herewith. I am hoping to get the manuscript for my own book on

Medical Zoology in preparation for publication this year; if I do not have *too many* good fellows like yourself to write me, I will succeed!

With regards as always,

Very siucerely yours,

H. B. WARD.

P. S.—I am accustomed to place parasites, when collected, in small dishes of warm salt solution. A short stay in this fluid or a little agitation suffices to relieve them of intestinal musuous and to permit the preserving fluid to penetrate. In fact it does no harm to keep them for six or twelve hours in this fluid.

YUNG-CHUN, June 30th, 1908.

DEAR SIR:—I should like to ask Dr. Aspland why he declines to look upon the three cases as the consequence of sepsis. In cases 1 aud 3 amputation was performed through septic tissue, aud it is the COMMON thing in such cases to have gangrene of the edges of the incision unless pure carbolic has been widely and freely used. In the second case the stump was "sloughy" and the lymphatics of the leg probably infected for some distance up and gangrene of the flaps in this condition is by no means unknown. There is no objection to amputation in these cases or for the matter of that in true Reynaud's disease. But in Reynaud's disease and cases of gangrene of the toes, where separation is commencing, it is preferable to allow the parts to spontaneously separate and the wound to become covered with healthy granulations. Sometimes the wound will cover over without surgical treatments, in other cases a plastic operation is easy. But all trace of the gangrenous process must have disappeared before this is undertaken, and if there is any doubt about this, the wound should be thoroughly treated with pure carbolic acid at the time of operation. Should gangrene be present, the rule is to amputate far away from the seat of disease, and probably in the second case amputation through the knee joint or a "Carden" would have saved the subsequent trouble. In these cases, however, strong antiseptics should be used and every care taken to prevent infection from below.

I am, yours truly,

J. PRESTON MAXWELL.

Toxic Gangrene.

[A reply to Dr. A. A. McFadyen's query in July number of the China Medical Journal.]

Suchien, July 23rd, 1908.

Dear Doctor:—In the famine of 1898-1899 in North Kiangsu I treated many cases as described in his letter, and I named the disease "gruns" disease, because at that time I thought it due to eating wild weeds, which we usually call gruns, and not sufficient grain. All the cases at that time were women, although I treated four times as many men in the daily clinic.

I diagnosed the trouble as stomach irritation and treated it as I do stomatitis—C. C. pills, chlorate of potash in fairly large doses, and a pill of gentian, ext. rhubarb and cinchonine later in the treatment. The result is like magic. A patient with eyes swollen shut, by the next morning, will have them fully open, and other swelling correspondingly reduced.

Gangrene never develops if treated promptly, and after treatment there is no advance of gangrene if already started.

The gangrene as I have seen it, is only of the skin.

I had one case with gangrene of the skin of the head and most of the face who recovered. The nose is often gangrenous.

I was so interested in these cases at that time that I wrote about them to the *New York Medical Journal*, and the article was published.

The strange part is I never saw another case, as I remember, until our next famine of 1906-1907. The cases came in numbers, and I still diagnosed it as "gruns" disease, and a short account of it appeared under famine notes in the *N.-China Daily News*. These responded to the treatment as mentioned above, not one, in about 30 cases that I saw, but what recovered in a few days, if seen before gangrene developed.

This spring, 1908-1909, I was forced to change my diagnosis. To my surprise in April the cases appeared again, and no famine to account for it. On inquiry I found it due to a poisonous plant, in all probability the same one that Dr. McFadyen sent you.

The case mentioned in the same Journal by Dr. Shackleton, entitled "More Gangrene from Frost," answers to the description of this poison weed. The hail was an incidental circumstance and covered up the true diagnosis.

I have made no external applications unless true gangrene has developed.

Yours, in the interest of our Journal,

Mrs. B. C. Patterson, M.D.

WENCHOW, 31st August, 1908.

DEAR DOCTOR :—Some little time since I sent you notes of a case of skin disease which you will recognise from photo now enclosed.

If you think the case worth publishing, will you kindly add "that the patient called four months after leaving the hospital and reported himself as quite well and all the ulcers healed. He left the hospital shortly after the ulcers had been scraped, using boracic ointment dressings.

Yours sincerely,

W. E. PLUMMER.

RENSHEO, July 4th, 1908.

DEAR DOCTOR :—I send you herewith a specimen, which I wish to submit to your experienced judgment for recognition. A patient with all the signs of Ankylostomiasis came in for treatment. His fæces showed eggs like those of Ankylostomum duodenale, except that they were very pale, so much so that I almost overlooked them after examining a number of slides.

Oil of eucalyptus the first day brought away six of these creatures. Thymol the second day and a repetition of the eucalyptus on the third did not bring any more and at no time could I find the typical A. duodenale.

Four of the six were alive and all were transferred to a watch glass of water. Next day three were living and the others had disappeared, the third day only two were alive and the other had also disappeared, I believe eaten by his surviving relatives. In size they were slightly longer than A. duodenale and about the same breadth.

There seems to be a distinct division into twelve sections ; all, except the second and third, being bright red in color. The second and third are light green.

The first section, the head, is smaller than the rest of the body and is freely moveable on a sort of neck. It is provided with a pair of "antennæ" near the end of what might be called the lip, and another pair farther back and wider apart. Along each side of head, and also on the second segment, are arranged long filaments looking like hairs. The lower jaw is provided with a row of teeth. On the ventral surface of the second section there is a short stumpy protuberance covered with hooked bristles, which seemed to assist the creature in grasping any object.

The last segment divides into two cone-like structures, which moved freely. These are provided with sets of claws, and when the creature has grasped any object the tail curls up, and these claws assist in rendiug it. The action is quite vicious looking.

Between these cone-like structures are two pairs of club-like processes, while anterior to these and upou the sides of the last section were three more pairs of these club-like processes. These seemed to take part in locomotion. On the dorsal surface at the end of the tail are two small knobs, each surmounted with a few long filaments. They look like a couple of hairy warts.

The creatures were very active in the water, and the activity increased when they were placed in a strong light.

It is alarming when looking for the quiet little A. duodenale to discover a vicious looking creature like this, and my curiosity has been aroused. My literature on the subject is limited. It may be that they are just some wanderers who came aloug to puzzle a very inexperienced observer.

I shall feel greatly obliged if you can enlighten my obscurity.

Yours very sincerely,

JAMES R. COX.

P. S.—If this is only some "ordinary garden creature" please don't occupy good space in the JOURNAL with it.

CHEMULPO, Korea, August 7th, 1908.

DEAR DOCTOR:—Many thanks for your letter just received. I am glad to get confirmation about Opis. sin., but the worst of it is that my earliest communication to the JOURNAL saying that I had found Schyst. jap. is thereby invalidated, as it was this same egg which, from pictures, I mistook. I fear that any one who wanted to write about S. j. might quote my letter of the past and say that it is found in Korea, which may be true, but is not proven. There is uo doubt that O. s. is common here. I have found it in many cases, all Koreans, though not often in this quantity, and think I have probably overlooked it in many more, as it requires more search than the more usual larger kinds, and I am not always very careful, especially as my earlier work was done with thicker films, than I use now, and small eggs were easily missed. The method I described to you makes tbe films nice and tbin, and I am much less likely to overlook things now.

Conceruing this same method I have lately beeu mounting the films after drying in formalin as suggested in the JOURNAL, and find that

while I get very nice results for hard eggs, ankylostomum tend to shrivel and do not look nice, and it has occurred to me that it can be improved by making the film, butter side up, as before and examining it, and if it is worth keeping putting a drop of dilute formalin onto a clean slide and transferring the film face down to it at once before drying, so as to keep it always moist and then ring it with balsam. I have not had a chance of trying this with ankylostomum since thinking of it, but there can be no doubt that it is at least as good as letting it dry and ought to have advantages, so I hasten to mention it, so that if not too late you can amend the note you make of it in the JOURNAL by the addition of this point. The only possible objection is that the eggs will be floated about and will not be in the same places as when first examined, but they will all be there, so that does not really matter.

Re tricho. dis., he is said to do no harm, and this may be so, but at least one of mine when passed was as full of blood as is ever an ankyl.

I am afraid I rather agree with you about my large eggs being distom. ringer. and I fear that he may not even have swallowed the sputum, but spat into the motion, as I cannot trust my boys to prevent that sort of thing. I am sorry to say that not having a really scientific mind I did not investigate that point or his sputum, and though the idea you mention did occur to me later he was then gone and I could not test it. I may say, however, that I did not always find the eggs, but did so whenever there was some bloodstained mucous in the stool, which supports the view.

Yours truly,

HUGH H. WEIR.

Reports of Customs Surgeons.

REPORT ON THE HEALTH OF KONGMOON FOR THE SIX MONTHS ENDED 31ST MARCH, 1908.

By Dr. JOHN A. McDONALD.

The report for this port must necessarily be brief, as the author has not been able as yet to become acquainted with all local conditions.

The port, which is on the main branch of the West River, is distant from the city proper about two miles. Though it is surrounded by villages we are free from the odors, etc., common to a Chinese city. The country round is for the most part given up to mulberry production. There are a few gardens and paddy fields. The same system of mulching is used as elsewhere.

The houses occupied by the foreigners are on a fairly high piece of land. It has, however, been flooded. The system of drainage is on the whole poor. A system of sluices are laid at a short depth below the soil. The new Customs buildings must be excepted. There open drains are used. Some of these empty into small canals running past the houses, the others into the river. At high tide these are not properly emptied, and of course there is no means of flushing. For a while the above mentioned canal was quite offensive owing to the practice on the part of a few of dumping night soil into it. Lately this has been stopped.

The drinking water is obtained from the river. This is not as bad as it might seem, for there is, as a rule, a swift tide flowing by.

The rainy season and heat extended into October. This spring we have had bright sunny days to take the place of the customary dull damp ones. This of course has been beneficial to the health of all.

Measles and whooping cough, both of a mild type, have been prevalent among the children. Apart from these the general health of the foreign community has been good. Small-pox has broken out, but so far is limited to the boat population.

Of the cases which have come to the dispensary for treatment the larger number have been for eye troubles. Many of these were hopelessly blind. In a number of the cases of ulcerative keratitis a history of small-pox as the origin was obtained. Granular ophthalmia is common among the boat people. Several cases of cataract have been seen. Two of these were under seven years of age. Operative treatment has,

owing to lack of accommodation, been limited. The question is, What can be done to preveut such loathsome eye troubles as present themselves?

I have not been able as yet to confirm the report that vesical calculus aud malaria are common in this district. I bave very good authority as to the veracity of the former.

An interestiug case of erythema multiforme bullosum fell to my lot. When first seen the patient's body was covered with large purplish blebs. The mucous membrane of the mouth and conjunctiva were also affected. Though weak the patient showed no other objective symptoms. The treatmeut given was sodium salicylate with occasional doses of magnesium sulpbate.

RAPPORT MEDICAL, POUR DE PAKHOI.—OCTOBRE, 1907—MARS, 1908.

Par le Dr. R. ASCORNET.

Nous n'avons que fort peu de cboses à dire au point de vue medical pour le Port de Pakhoi et les environs, pour la période coruprise eutre le 1er Octobre 1907 et le 31 Mars 1908. Les epidémies de peste et de choléra qui ont sèrie en 1907, ont pris fin en Septembre, et depuis, nous n'avons pas entendu dire qu'une reprise de ces epidémies, ou l'apparition d'une nouvelle ait en lieu.

A point de vue Meteorologique, on peut dire que l'année 1907 a été très pluvieuse surtout dans le deuxième semestre. Nous n'avons pas eu de typhon cette année ; le 28 Octobre seulement une queue de typhon qui nous a donné quelques inquiètudes.

Les températures moyennes ont été sensiblement les mêmes pendant les semestres Octobre-Mars 1906-1907 et Octobre-Mars 1907-1908. Pas de phénomènes sismiques à signaler sans un très léger tremblement de terre, du cotté de Chap-Sy, qui a coïncidé avec la queue de Typhon.

La population Européenne de Pakhoi s'elevait à environ 60 personnes au 1er Octobre dernier, y compris le Missionnaires de Tien-cheou et de Hoei-chao.

Nous u'avous rien à signaler au point de vue Pathologie Européenne. Toutes les affections que nous avons eu à traiter à une exception près étaient en général bénignes. Le plue grand nombre des malades a été fourni par le servicè des Douanes.

Pas d'epidémie à signaler parmi les Européens ou le personnel attaché à leur service. A notes une naissance en Octobre. Rien uon

Tableau Statistique de Météorologie pour 1907 et 1908.

Pakhoi. Service des Douanes impériales.

	Moyenne Mensuelle des Minimas.	Moyenne Mensuelle des Maximas.	Moyenne Mensuelle de la température.	Moyenne hygromitrique mensuelle.	Pluie totale du mois.	Quantité de pluie tombée le matin.	Quantité de pluie tombée le soir.	Température Maximum du mois.	Température Minimum du mois.	Observations diverses.
					mm	mm	mm			
Octobre, 1907 ...	22°.5	27°.8	25°.2	85.7	493.8	421.	72.8	31°.7	17°	Les températures sont pries sur le thermometre centigrade. Les Hauteur de pluies sont comptées en millimètre. La tension hygromitrique est calculée de 0 à 100 ce dernier diffusitant la saturation.
Novembre, 1907.	17°.5	24°.5	21°.05	74	17.5	17.5	...	29°.6	9.4	
Décembre, 1907.	12°.7	19°.7	16°.1	86	78.5	63.5	15	29	8	
Janvier, 1908 ...	14°.45	19°.73	17°.09	81	66.4	45.6	20.8	24°.8	9°.3	
Février, 1908 ...	10.82	15.62	13.22	81	46.7	39.4	6.7	25°	6°.9	
Mars, 1908 ...	14°.55	21°.36	17°.95	70	12.5	10.3	2.2	27°	8°.2	

Pakhoi, 2 Avril, 1908.

Medical Officer Customs,

Dr. R. Ascornet.

plus de bien particulier à dire au point de vue de la Pathologie Chinoise. Comme nous l'avons déjà dit plus haut, pas d'epidémie de Peste—de Choléra ou de variole à signaler du 1er Octobre 1907 au 31 Mars 1908. Toutefois nous avons constaté aprés la terminaison de l'epidémie de Choléra de 1907, une recrudescence d'affections gastro-intestinales diarrhée et dysentérie.

Nous signalerons aussi, le nombre tonjours croissant d'année en année des cas de Paludisme. Ainsi qu'on le voit par le graphique cijoint, la Malaria tout en sévissant plus ou moins toute l'année, augmeute notablement d'intensité dans les 4 derniers mois. Les cas ne sont en général par très graves, mais relativement tenaces. Cette augmentation du Paludisme est dû croyons-nous au difrichement de plus en plus considérable de la plaine, qui sèche autrefois est maintenant copieusemeut anoté d'eau et d'engrais humain et est devenue par mite un lieu d'élection et d'éclasion de moustiques, qui comme on le sait sont les meilleurs agents de propagation de la Malaria.

PRAYER OF A PHYSICIAN.

Prominent in Alexandria in Egypt in the Twelfth Century.

This beautiful and noble composition appeared first in the *German Museum Magazine, 1785.* A reprint of the same was published in the *Deutsche Medicinische Wochenschrift* some years ago. It was translated by Dr. Leonard Weber of New York and printed recently in the *Journal of Tropical Medicine and Hygiene.* The prayer, which was worthy of a wide circulation, reads in this translation as follows:

"Oh Lord, Thou hast most wisely fashioned man's body, thousands upon thousands of organs hast Thou joined in it to work incessantly in order to build up and preserve the heautiful whole, the dwelliug of the immortal. In perfect order and union they will perform their functions, but when their harmonious action is interrupted by the fragility of the constructive material or the perversity of the passions, the forces will antagonize each other and the hody may perish. And Thou sendest the warning messengers, diseases, to man, to show the threatening danger and stir him to try to avert it.

"Thy earth, Thy rivers, Thy mountains are full of healing substances which have the power to mitigate suffering and to prevent the destruction of Thy creatures. And to man Thou hast given wisdom to study the body and understand the organs in their order as well as disorder; also to seek and find those remedies and prove and prepare them according to the indications, for disease.

"By Thy grace I have been called to watch over sickness and health of men, and I make ready now to start in the professional work

of the day. Be my strength, good Lord, in this great undertaking and bless my work that it may be good.

"Let me be filled with love of man and my art, and do not let desire for gain or position or fame interfere with my duties.

"Preserve the strength of body and mind that I may always and equally serve the poor and the rich, the good and the bad, the friend and the enemy, for all of them are Thy creatures.

"Let my reason be steady and sound, that I may well observe what is before me and truly surmise what is hidden. Let my mind not be confused and overlook what is present, or go beyond that which can be actually seen and proved into the territory of the speculative, the invisible. For fine and scarcely traceable are the border-lines of the great art in caring for the health and life of man.

"Let me be always myself and my attention fully concentrated; at the bedside nothing foreign must disturb it, so that all the experience and insight I may have will be at my command in the case before me.

"Fill my patients with confidence in myself and my art, and with obedience to my advice.

"Keep away, O Lord, from the sick chamber every quack and the whole army of advisory relatives and the over-wise nurse; they constitute a cruel set of people, who in their vanity, may spoil the best work of medical art, and not infrequently assist the disease in destroying the patient.

"When wiser counsellors than myself are ready to correct and improve my knowledge, let me gratefully receive their counsel, for art is broad and wide and no one man can know all.

"But should the vain and unwise find fault with my skill, then make me firm as steel to stick to the truth and right of my position, and maintain the same against the greater fame and age of others.

"Give me patience and humility in dealing with such of my professional brethren as, being proud of their long years of practice, may try to push me aside and belittle my knowledge. I will profit from the wisdom which they have to offer, but will also try to bear with their haughtiness; for they are old in years, and old age does not always control the passions—and I also hope to grow old in walking before Thee, O Lord.

"Whatever I have or may possess will suffice me, but not as to science and art. Let never the thought arise in me: 'I have of knowledge enough,' but extend to me the power, the leisure, the burning desire to correct and adjust my accomplishments and add to them steadily. Great is our art, but the power and extent of the human mind is also vast and its limitation unknowable. Further and further we advance, but in the science of yesterday we find errors to-day, and that of to-day will be questioned to-morrow.

"Give me Thy gracious help and protection, O Lord, in the work to which I will go now, that it may prove a blessing to those who shall to entrusted to my care."

In Memoriam.

The Late GEORGE F. STOOKE, L.R.C.P.

George Frederick Stooke was born in March, 1876, in Bristol, England. When he was about 12 years of age he came to China with his parents, who came then to take charge of the China Inland Mission sanatorium at Chefoo.

Receiving his education at the C. I. M. school he went direct from that school to Edinburgh and entered upon his medical curriculum. He was a most successful student, carrying off many prizes every session. After five years' study he graduated L.R.C.S. and P.

During his medical course in Edinburgh he associated himself with the Livingstone Institute in the Cowgate, taking part in the Christian work of the institution. Having gone to Edinburgh with the intention of becoming a medical missionary, and with China as his prospective field, he offered himself to the Foreign Mission Committee of the Church of Scotland and was accepted.

In the summer of 1899 the Church's Mission in China had lost one of its doctors, Dr. David Rankine, and when the appeal was made at home for a doctor to take Dr. Rankine's place, Dr. Stooke at once volunteered to proceed to China. He arrived in Ichang in March, 1900, and set himself at once to acquiring the language.

In 1901 he was married to Miss Jessie Graham, who also was a doctor, having the Edinburgh qualification of L.R.C.P. and S. Hospital and dispensary work was commenced in that same year, and from that time the work went on increasing as the fame of Dr. Stooke and his colleagues spread through the city and surrounding district.

There was an ideal hospital staff. There were Dr. Stooke and his wife and Dr. And. Graham, who had been a fellow-student with both. Medical work in Ichang seemed after previous ups and downs to be in a fair way of great prosperity. Dr. Stooke went home on furlough in January, 1906, and returned to work in September, 1907. He felt so well and strong after his furlough and looked forward to years of successful work when, alas, the dread cholera seized him and in a few hours he has passed away.

That was on August 16th. It is not known how he contracted the disease. His wife was with him all the time and did everything for him that could be done medically. It is a great grief to all of us and a great loss to the Mission—this sudden death of Dr. Stooke. He was an all round man, not only proficient in his profession, but an accomplished musician and a thoughtful preacher.

A man's proficiency in his medical profession can be judged by the numbers who seek his aid. The hospital here had its wards full, the out-patients would number over 100 per day, and the calls to attend officials and others in their homes were not few. Besides the Chinese work, Dr. Stooke had the medical care of the community.

On Sunday evenings at our English service he played the organ, and when occasion required would preach. His sermons were always thoughtful and well prepared. There was no slipshod work done by him. Thoroughness was surely his motto, and that alone could account for his skill in his medical profession and for his ability in other directions. To me he was a companion, and as such I miss him and deeply mourn his loss.

It may not be amiss here to acknowledge the heroism of his wife. After the doctor's death she remained in Ichang and attended to several serious cases of illness amongst the foreigners. Everyone owes to her a debt of gratitude for her unselfish devotion to the needs of others in the midst of her own sore bereavement. She is left with two little children of six and three years of age respectively.

The community here contemplate the erection of some memorial to the late Doctor, either in the hospital or elsewhere, and the Chinese Christians and friends are preparing a like thing to be inserted in the wall of the native church.

W. DEANS.

DR. GEORGE F. STOOKE OF ICHANG.

In the passing away of Dr. George Stooke the medical missionary body has lost one who gave great promise to be one of its most brilliant members in China.

The suddenness of his home call reminds us once more that summer in the Far East is often fraught with tragic possibilities. Last year Hodge, this year Stooke; the one in the full ripe experience of many years of service, esteemed and loved by all who knew him; the other young, bright, keen, and giving promise of taking a high place in his profession. The Yangtze Valley has suffered a great loss both last year and this.

A missionary and the son of a missionary, educated at the C. I. M. school Chefoo, Dr. Stooke from his boyhood days was an indefatigable student and that industry and perseverence won for him a high place in all his classes during his medical course. It was the regular thing for Stooke to obtain a few class medals every year, and his fellow-students knew well that to get ahead of George Stooke meant hard work and plenty of it.

Had he chosen to remain at home, there can be no doubt he would have taken his place in the front rank of the medical profession, but the "call of the East" came to him when the news of Dr. Rankine's death at Ichang reached Scotland. At that time he was filling the post of resident doctor in the Edinburgh Medical Mission, dear old "39" Cowgate, one of the slummiest parts of Edinburgh; there, along with a band of men who are now scattered over the world, he ministered to the needs of the sick poor. Already he had decided that China, the land of his youth and the home of his parents, should have his services; his Master's "follow me" was heard and answered, and allurements of position could not tempt from the path of consecration.

His intention at that time was to have remained for more post graduate study, and probably he would have taken his F.R.C.S. examinations before setting out for China, but the needs of Ichang appealed to him and he could not wait longer, but set out for this needy land.

I well remember the Sunday evening he bade his fellow-students farewell. "Brothers", he said, "perhaps you may have heard that the place I am going to gets the name of being unhealthy. I trust, however, none of us will shrink from a post because there is danger." To him the call was not to the place where he was needed merely, but to the place that needed him most.

He arrived in China in 1900, and after six years of splendid service at Ichang he went home on furlough. Returning in the summer of 1907, he spent some time with his parents at Chefoo, and as he bade them good-bye he remarked that he felt splendidly fit and strong for work, and now after one more year's brief service he has been smitten down with that scourge of tropical summers—cholera.

The severe epidemic which has visited the Yangtze Valley has carried off thousands of Chinese. He had been attending some of these in his hospital and probably got the infection there. It was true of him as of his Lord and Master, "He saved others, himself he could not save." He gave his life for those he had come to serve, a martyr as truly as any who have gone before, and his brave life thus laid down will bear abundant fruit in the coming years.

He was enthusiastic for music, for chess, for the Chinese language, for medicine, and for his high calling as a missionary. May God send us many more medical missionaries like George Stooke.

J. G. CORMACK.

ANALYSIS OF THE HOT SPRINGS AT PORT EDWARD, WEI-HAI-WEI.

The report of the analysis of the waters of the above springs by Mr. Frank Browne, government analyst, Hongkong, gives the result as follows:—

70,000 fluid parts (1 gallon=70,000 grains) contain:=

Sodium sulphide	2.6
,, sulphite	2.9
,, sulphate	23.1
,, chloride	833.6
Potassium chloride	11.9
Magnesium ,,	17.1
Calcium ,,	314.0
,, carbonate	14.0
Alumina and iron peroxide	.4
Silica	9.5
Parts by wt.=	1,229.1

PARASITILOGISTS' MEETING AT BOSTON, AUGUST 21, 1907.

Front Row: E. Linton, M. Braun, A. E. Verrill, R. Blanchard, A. E. Shipley.
Middle Row: A. Hassall, W. R. Coe, Young, C. W. Stiles, H. B. Ward, B. H. Ransom, W. C. Curtis
Rear Row: F. B. Barker, O. Fuhrmann, H. S. Pratt, M. Lühe, Al. Mrázek.

The China Medical Journal.

VOL. XXII. NOVEMBER, 1908. NO. 4.

The yearly subscription to the China Medical Missionary Association is $4 Mex., payable in January of each year. This includes the JOURNAL and postage on the same, whether local or foreign.

All changes of address, departures on and arrivals from furlough should be notified to the Secretary and to the Presbyterian Press. Members are requested to invite new comers to join the Association.

The Editors will be obliged if all those who are building hospitals will send copy of plans and detailed description (in duplicate if possible). These will be loaned, on application, to members who are proposing to build.

Editorials.

Notice!

We desire to call the attention of our readers, and especially of advertisers, to the fact that Mr. L. P. Larsen no longer represents the CHINA MEDICAL JOURNAL as advertising agent, or in any other capacity whatsoever; nor has he so represented it for some months past.

* * *

Dr. George F. Stooke of Ichang.

With deep sorrow we record the death of our beloved colleague and fellow-worker, Dr. George F. Stooke, of the Church of Scotland Mission at Ichang, Central China, who passed away after a very short illness in August. Dr. Stooke is one of the many victims of the terrible epidemic of cholera which reigned in the Upper Yangtze Valley during this past summer. He died while on duty at his post. The JOURNAL has lost in Dr. Stooke's death one of its most regular and most interesting professional contributors. Dr. Stooke was a keen observer, and whatever he wrote was the result of clear thinking and hard work. One of his best contributions, that in the shape of a Customs' Surgeon's Report on Ichang Fever, appeared in our issue of July, very shortly before his death, and a letter received from him, within two days of his death, gave promise of another equally interesting paper and the assurance of his never-failing interest and sympathy with the Association, its JOURNAL and its work. We take this opportunity of extending to his parents and family our tenderest sympathy and deep sense of loss.

It may be truly stated of the medical profession that the poor we have always with us. At the present epoch Shanghai seems to be teeming with "poor European fathers," who manage to scrape together out of their hard-earned pennies enough to take their families and themselves to Kuling for the summer, but apparently are shaving things so close that they have no margin left to pay their doctors' bills. There is no subject on which the average business man seems to be more unbusinesslike than on the subject of doctors' bills. Why on earth a missionary doctor should be expected for one instant and on any business ground to work during his holiday for nothing, or to charge less than any other doctor on earth, is beyond our dim mortal vision. In fits of mistaken charity we have known some of our colleagues to waive a definite charge and suggest a contribution to the Mission hospital instead. But in our experience the result is usually a long-delayed and much grudged contribution of say $5.00, where a bill of taels 50.00 might rightly have been charged, and the added expectation that the generous gift of $5.00 be recorded on the hospital accounts at the hands of such and such a generous-hearted European father. It is not, perhaps, realized by foreigners living in China that the undercharging on the part of medical missionaries has been periodically and regularly complained of by private practitioners as "unfair undercutting". We seem to be between the devil and the deep sea, and suggest that the deep sea has the greater attraction financially and on all scores. (No reflections on "A poor European Father".) We note that a certain member of the army of the disgruntled was charged Tls. 14.00 for the opening of a boil. The opening of a boil is a surgical operation, though a minor one, and usually requires a certain amount of preparation and dressings, and it is to be expected that a considerable degree of care must be exercised to prevent mixed infection, spreading, and so on. This charge is not an excessive one, even if but one visit was paid; if more, it was most reasonable. We would suggest that there should be no difference whatever between the charges of medical missionaries and other medical practitioners. It is usual for private practitioners to be particularly reasonable in charges to clergy, missionaries, and other poor European fathers, and medical missionaries should be no less

Poor Fathers and Missionary Doctors.

so. The fact that a man is in a tight place and needs medical assistance, no matter how badly he may need it, no matter how poor or how rich he may be, is no excuse for an exorbitant charge, and righteousness towards our colleagues in private practice, our own protection in the effort to obtain a few weeks' rest and mental relaxation, and the value of our services, entitle us to compensation without any manner of doubt whatever. The peculiar refinement and benevolent nature of our work forbids us to collect, from those who will not pay, as other debts of a no better earned nature are wont to be collected.

* * *

In the *Shanghai Mercury* of Saturday, September 26th, 1908, we find the following:—

ANTI-OPIUM TABLOID.

The Fire Again.

Dr. W. Graham Aspland, Peking, writes to the *China Times*:—Kindly allow me to make an appeal through the medium of your paper to a certain class of businessmen in China, and to the public generally, upon the question of "Anti-Opium Tabloids".

I am urged to this the more from the fact that I have just had under my treatment a big official of one of the Chinese Boards for the cure *not of opium smoking*, but of "anti-opium tabloids" which he commenced to take a year ago. These tabloids, like many others I have examined, contain morphia in large doses, and, alas for the nation to which I belong, they are sold and prepared by a British firm doing both wholesale and retail business here in China. How many tons of morphia tabloids are being sold in China at this present moment I would not like to venture to guess, but I am prepared to believe it is appalling.

I am prepared to admit, what has been often stated of old, that companies and corporations have neither conscience nor soul, so that publicity of facts is all one can aim at until the Chinese themselves can be roused to take some action. Even in remote country villages morphia tabloids and hypodermic syringes are frequently seen, and a condition of things which allows a Chinaman whom I know to buy daily a dram bottle of Japanese morphia (60 grains) imperatively calls for restriction if not prohibition.

There can be no extenuating circumstances associated with the sale of these "anti-opium tabloids", for I have not found one that contained any antidotal drug—any stimulant, or tonic ingredients—but simply morphia made into a tabloid with ordinary household flour, so that the sale is not accompanied with any honest intention of relieving the suffering but finding that there is a big market for morphia, under the name of "anti-opium" tabloids and powders, foreign trading companies, who do no trade in arms and ammunition, follow this lucrative one under the heading of benefactors.

May I quote from the recent editorial of the CHINA MEDICAL JOURNAL, for what is there said regarding "patent medicines" can more forcibly be applied to anti-opium tabloids?

Then follows a liberal quotation from our editorial on the subject. We heartily endorse the sentiments expressed by Dr. Asp-

pland. Of their truth there is no shadow of doubt. Further argument would be superfluous; the facts are all-convincing.

We have been asked by the agent of Messrs. Burroughs, Wellcome and Company to call attention to the infringement of their patent name "tabloids" as used by this proprietary article.

* * *

Time for more Research Reports.

The chairman of the Research Committee, Dr. James L. Maxwell, Jr., 31 Hammelton Road, Bromley, Kent, England, asks us to call the attention of the members of the Association to the fact that Fecal Research Reports for the past year are due and should be forwarded to him as early as possible after the receipt of this notice.

We repeat that all contributions, even though the number of cases reported be as small as five only, will be welcome and serve to add to the general final result. The chairman is at leisure at present, and desires to do as much in the way of compilation as possible at this time.

* * *

More Branches.

A cordial welcome and best wishes to the West River, Han Valley and Mokanshan Medical Missionary Associations.

ASSOCIATION NOTES.

BRANCHES OF THE C. M. M. A.

Central China Branch:—Dr. J. G. Cormack, Hankow, Secretary.
Kuling Branch:— Dr. C. W. Somerville, Wuchang, Secretary.
Manchurian Branch:— Dr. W. Phillips, Newchwang, Secretary.
Korean Branch:— Dr. H. H. Weir, Chemulpo, Korea, Secretary.
Shanghai Branch:— Dr. A. W. Tucker, St. Luke's Hospital, Secretary.
Mokanshan Branch:— Dr J. C. A. Beatty, Hangchow, Secretary.
West River Branch:— Dr. Kate W. McBurney, Takhing, Secretary.
Han Valley Branch:— Dr. R. Anderson, Fancheng, Secretary.

NEW MEMBERS OF THE C. M. M. A.

Joined through the China Medical Journal:—

ESTHER ANDERSON, M.D., Ohio Med. Univ., A. P. M., Soochow.
WALLACE CRAWFORD, M. D., C.M., Western Univ., London, Can., Canadian M. E., Pien Hsien Szchuan.
T. O. HEARN, M.D., Maryland Med. Col., S. B. C., Pingtu.
MAUD AURA MACKEY, M.D., Col. Med., U. of S. Cal., A. P. M., Paotingfu.
VICTOR SCHOCH, M.D., Zurich Univ., Basel, Kaying, via Swatow.

Joined through the West River Branch:—

JESSIE A. MACBEAN, M.D, Toronto University, Canad. Pres., Kongmoon.
MRS. DORCAS F. MEADOWS, M.D., Univ. of Nashville, S. B. C., Wuchow.
CHAS. A. HAYES, M.D., Univ. of So. Cal., S. B. C., Wuchow.
MRS. ALICE J. HAYES, M.D., Univ. of So. Cal., S. B. C., Wuchow.
IDA M. SCOTT, M.D., Cleveland Homeo. Med Col., Reformed Pres., Takhing.
KATE W. MCBURNEY, M D., Wom. Med. Col. of Pa., Reformed Pres., Takhing.
JEAN G. MCBURNEY, M.D., " " " " " " " "
FRANK OLDT, M.D., United Brethren in Christ, Canton.

NOTICE! Letters on Association business requiring immediate attention should be simply addressed, *Secretary, C. M. M. A., 2 Shantung Road, Shanghai*, so that they may be dealt with in event of Dr. Coulaud's absence. Dues should be sent to the Presbyterian Press.

The attention of those going to America on furlough is drawn to the advertisement of a course in tropical medicine at the Philadelphia Polyclinic.

There are four insets in this number of the JOURNAL:—A Chinese advt. of our medical books, which please pass on to your Chinese staff, a "List of Members of the C. M. M. A.", "A Nurses' Association" and "Resolutions passed by the Medical Missionary Association of China." Advanced copies of the latter are being sent out in this way for those who may wish to have them at once. Copies are being sent to the Boards.

LOCKHART UNION MEDICAL COLLEGE, PEKING.

The report of the work of this college for the past year is of the greatest interest to us. An institution founded, built up, and governed by foreign missionaries is receiving government recognition, and its successful students government diplomas. The number of students—50—is at present small, but this is only the beginning.

The faculty, residing in and near Peking, numbers eleven, and in addition nine others come from a distance to deliver short courses of lectures.

The examination lists show a splendid number of passes, and the examiners, drawn from the faculty and the various legations, etc., avow their great satisfaction with the results attained.

The religious aspect of the work shows excellent progress; the meetings, classes and out-station work having given most encouraging results.

Athletics also are by no means neglected; the students entering most heartily into all branches.

THE WILLIAM'S HOSPITAL, PANG-KIA-CHWANG, SHANTUNG.

This last year of work has completed thirty years of work in this hospital among the sick and sad of Northern Shantung, and in this time nearly 326,000 have been treated as out- or in-patients, and have had the Gospel preached to them.

A women's hospital is now within sight, and the increase in room and efficiency will, we believe, be welcomed by none more than the Chinese themselves.

C. M. S. HOSPITAL, NINGPO.

Increased numbers in both out-patient and in-patient departments and an all-round good year, is what this hospital has to say for itself.

Dr. Cole has evidently some stories to tell of his patients and their fatuity and ignorance. For instance, the old dame who brought her grave clothes with her when she came into hospital, and the gentleman with double compound fracture of the legs, who was able, notwithstanding his protested inability to pay food money in hospital, to bring to light $50 for a native doctor to make his legs worse. A curious case was that of a woman afflicted with so-called 'sheep-madness', who would lose consciousness of her surroundings and crawl about on all-fours 'baa'-ing like a sheep. Suggested treatment (by natives) was grass; successful treatment (by foreigner) nerve sedatives.

The spiritual work has been most encouraging to all concerned; many conversions having taken place.

THE CAROLINE A. LADD HOSPITAL, PYENG-YANG, KOREA.

One of the most noticeable features of the report for last year, May, 1907, to May, 1908, is the relatively large attendance of children; out of a total of 13,094 out-patients, there were some 8,444 new attendances, and of these 1,865 were children,

not far off a quarter of the whole. It would seem that the ignorance and carelessness of parents in Korea is not so marked as in some parts at least of China.

With such an out-patient number and 444 in-patients, and with some 525 surgical operations, Dr. Wells has had his work cut out, and then in addition there is the evangelical work which has been diligently carried out to the lasting benefit, without doubt, of very many amongst that large number.

HWAI-YUEN HOSPITAL.

The records of this hospital for the past year show the number of out-patients to have been 8,098, the number of in-patients 104, and the number of out-calls 49. Of the total number of 314 operations, 73 were with general anæsthesia and 199 with local.

The calculus cases, as in past years, have formed a large proportion of the in-patients. The increasing confidence in the foreigner and readiness, even eagerness, to be operated upon, are encouraging signs.

One patient, who was especially grateful, had been relieved of a sixteen-pound lipoma of the back. The day after operation he was asked if he suffered any pain. "No," he said, "but my back is cold in the place where the tumor used to be!"

LU-CHOW-FU HOSPITAL.

The records of cases in this hospital show a decided increase on last year's. The out-patients numbered 33,183 against 21,610 for last year, while the in-patients numbered 438 as against 345. The number of operations was 160 and obstetric and eye cases were 12 and 90 respectively.

TAI-CHOW-FU HOSPITAL, CHEKIANG.

This last year, notwithstanding the lack of a foreign building for a hospital, there have been in-patients to the number of 258, and 100 operations have been performed. 21 of these were on the eye; cocaine and eucaine being used in 19 of these. In general surgery chloroform was uniformly used.

One of the eye cases was that of a lad who was suffering from glaucoma of the left eye; the right one being also somewhat affected. The treatment was scleral puncture of the left eye, followed at once by iridectomy. During the first week there were occasional hæmorrhages into the anterior chamber, then the eye cleared and the vision returned. Nine months after the eyes were still perfectly good, no more signs of disease having appeared in the right eye.

Mycosis fungoides was removed from the bridge and ala of a man's nose and a skin-grafting carried out, and later the man left the hospital without a trace of the disease.

The dispensary work in the city, and a number of times during the year in outlying districts, made Dr. Anderson exceptionally busy.

A new hospital is now in the course of being built.

PUBLICATION COMMITTEE.

SUBSCRIPTIONS.

American Baptist Missionary Union	$230.00
Dr. C. E. Tompkins...	10.00
Mr. Morris S. Shipley, per Dr. J. B. Neal	23.45
C449592	134.95
American Presbyterian Mission	230.00
	$628.40

We also gratefully acknowledge the gift of £500 from H. S. Wellcome, Esq., of Messrs. Burroughs, Wellcome & Co., to be used for the expenses of publishing the Lexicon, Hare's Therapeutics, a Materia Medica, and Hutchinson and Rainy's Clinical Methods. The money is to be used as a special perpetual publishing fund under the control of the C. M. M. A. and devoted to the publication and republication of the above books.

Dr. Ingram writes that the second volume of Hare's Therapeutics should be ready early in December. The delay has been caused by waiting for some special type. Three volumes of the revised edition of Kerr's Practice of Medicine are ready, and can be obtained from the Baptist Publishing House, Canton. The price will be at least $2.50 per set.

The secretary's absence from China this summer on account of personal and family sickness has delayed the work of the committee somewhat. The programme for this season is the printing of a Surgery (Rose and Carless), Medicine (Osler), Anatomy (condensed Gray), Pharmacology and Pharmacy (eclectic) and others. Dr. McAll is preparing Coat's Pathology; Dr. Cormack, Hutchinson and Rainy's Clinical Methods, and Dr. Cochrane, a Regional Anatomy.

The copyright, plates and remaining sets of the Foochow Anatomies have been purchased from the A. B. C. F. M. Dr. Whitney's Gray is at present the only anatomy available. It is a full translation, and will remain the standard complete *Systematic* Anatomy. We gladly acknowledge the sympathetic and generous way the A. B. C. F. M. has acceded to our wishes in this matter. There is a very definite demand for a smaller systematic work and for one dealing with the subject by regions, and, as above noted, we are seeking to supply these demands. Other books will be reported later. Experience teaches the folly of prophesying when the printing will be completed.

The question comes, "How long before you can give us something in the shape of a magazine for our helpers and medical students?" Not for a year or two unless a man can be found to undertake the editing and publishing Any way the students are hardly familiar enough yet with the new terms to profit by a Chinese medical journal and the text-books are more urgently needed.

A new edition of Dr. Neal's Analytical Practical Chemistry has just been published.

If those who subscribed to the committee's funds last year will repeat their donations it will very materially assist its operations. There are many books, atlases, etc., yet lacking.

Reports of Local Branches.

WEST RIVER BRANCH.

A meetiug of the members of the medical profession, from the West River and its branches, to discuss the organisation of a branch association of the Medical Missionary Association of China was held in Macao, July 20th, 1907, at the residence of Dr. Wright. Those present were the Drs. Meadows, Wright, K. McBurney, J. McBurney, and McDonald.

The following officers were elected:—President, Dr. Meadows; Vice-President, Dr. Wright; Secretary Treasurer, Dr. K. McBurney.

The second meeting of the West River Medical Missionary Association was held at Macao, July 27th, 1907. A constitution and by-laws were adopted.

Resolved, That "This Association recommends that Wuchow be added to the list of prospective medical schools as a uniou school."

The third meeting of the W. R. M. M. A. was held at Macao, August 19th, 1907.

It was decided to assign to each member a subject on which he should prepare a tract suitable for publication in the Chinese papers and for distribution in dispensaries and hospitals. Subjects were assigned as follows:—

Dr. J. G. Meadows.—Open Wounds and Bruises.
Dr. J. M. Wright.—The Eye.
Dr. J. A. McDonald.—Throat and Mouth.
Dr. J. G. McBurney.—Light and Ventilation.
Mrs. Meadows.—Care and Feeding of Infants.
Dr. Frank Oldt.—The Ear.
Dr. K. W. McBurney.—Dietetics.
Dr. C. A. Hayes.—Preveution of Communicable Diseases.
Dr. Jessie A. MacBean.—Tuberculosis.
Dr. Philip Rees.—Obstetrics.
Subject for General Conference.—Dispensing Medicines.

At the conference held at Takhing, January 22nd, 1908, it was *Resolved*, That trained nurses be invited to take part in our meetings, and that all privileges extended to them by the China Medical Missionary Association be given them by our society.

Resolved, That application be made to the Central Association to admit the West River Medical Missionary Association as a branch association.

Additional subjects were assigued as follows:—

Dr. Ida M. Scott.—Evangelistic Work.
Dr. Jean G. McBurney.—Gynecology.

Resolved, That Dr. Todd be appointed to write articles for our Society on Histories, Records, and Report blanks in connection with our work.

The following motion was made and carried: That the Committee on Medical and Nursing Education be composed of a member from each Mission.

The following represeutatives were appointed:—

Wuchow, Baptist.—Dr. J. G. Meadows.
Wuchow, Wesleyan.—Dr. and Mrs. Rees.
Tak-hing, Ref. Pres.—Dr. J. M. Wright.
Kongmoon, Can. Pres.—Dr. J. A. McDonald.
Canton, United Brethren.—Dr. F. Oldt.
Canton, Pres.—Dr. P. J. Todd.

The following papers were read and discussed:—

"The Drug-room and the Druggist."—Dr. C. A. Hayes.
"Surgical Anatomy."—Dr. J. G. Meadows.
"Dietetics."—K. W. McBurney.
"Chronic Suppurative Tympanitis."—Dr. Oldt.
"The Eye."—Dr. J. M. Wright.

Subjects were assigned for the next conference as follows:—

Dr. J. G. Meadows.—Open Wounds and Bruises.
Mrs. Meadows.—Care and Feeding of Infants.
Dr. C. A. Hayes.—General Medicine (selected phase).
Mrs. Hayes.—Prevention of Communicable Diseases
Dr. McDonald.—Syphilis.
Dr. Oldt.—The Throat, Tonsilitis.
Dr. MacBean.—Tuberculosis.
Dr. Wright.—Operations on the Eye.
Dr. Scott.—Contribution from Homeopathy.
Dr. Todd.—Surgery (selected phase).
Dr. Rees.—Obstetrics.
Dr. Hooker.—His own choice of topic.
Dr. J. G. McBurney.—Gynecology.
K. W. McBurney.—Religious Phase of Medical Work.

The hour from 8.00 to 9.00 p.m. was given to a general meeting of all missionaries present for prayer and Bible study. We were led by Rev. A. I. Robb, senior missionary of the Tak-hing Ref. Pres. Mission, the portion chosen for consideration being the last chapter of Acts.

The next meeting is to be held at the summer residence of the Drs. Meadows, on Long Island. It was decided to try to arrange for some practical work in surgery at that time. After reading and approval of minutes of the meetings of this conference the Association adjourned to meet at Loug Islaud.

President, J. G. MEADOWS.
Sec. Treas., K. W. MCBURNEY.

KULING BRANCH.

President:—Dr. THOMAS GILLISON.
Vice-President:—Dr. W. ARTHUR TATCHELL.
Treasurer:—Dr. E. H. HUME.
Secretary:—Dr. C. W. SOMERVILLE.

Programme for Season.

July	28th, 1908.	President's Address.
Aug.	4th, ,,	Surgical Technique, Dr. Hart.
,,	11th, ,,	Spirochæta Pallidium. Dr. H. S. Houghton.
,,	18th, ,,	Social Evening.
,,	25th, ,,	Local Anesthesia. Dr. Logan.
Sept.	10th, ,,	Annual Meeting, etc.

All meetings to be held on Tuesday evenings, at 8.15, prompt.

In consequence of inclemeut weather and other causes, the original programme for the season has not been adhered to. Only four meetings have been held, with an average attendance of 20.5. Two of these consisted of clinics, which proved of intense interest and value. The paper on Spirochæta pallidium was greatly appreciated, but from its exhanstive character failed to evoke much conversation. Dr. Hume's paper was very instructive. Both are to be published iu the JOURNAL.

At the commencemeut of this year, the secretary, after a protracted illness, was invalided home. Thus the whole business of the association has been more or less disorganised. Much had been auticipated for this seasou, but alas, very little has resulted. Such a condition is but a further proof that after all, the principal motive power of the association is the secretary.

Several resolutions, of more or less value and importance, have beeu passed, bnt nothing, to distinguish the largest medical association in China from its weaker compeers. Considering the undoubted talent to be diagnosed on Kuling each season, it is to hoped that the present year of atrophy, which is the first, may also be the last.

Seven new members have been elected this season, making a graud total of fifty uembers.

The thanks of the association are due to the ladies, who have weekly revived us with delicious refreshments.

MOKANSHAN BRANCH.

DEAR DOCTOR: At a meeting of medical missionaries resident at Mokanshan, held on July 22nd, a Mokanshan branch of the Medical Missionary Association of China was formed, with constitution aud

by-laws in agreement with those of the parent association.

At the inaugural meeting the following officers were elected for the year :—

President :—Dr. R. T. SHIELDS.
Vice-President :—Dr. H. W. BOONE.
Hon. Secretary :—Dr. J. C. R. BEATTY.

During the months of July and August seven meetings were held, when papers were read and very helpful discussions on purely medical and medical missionary subjects took place.

In all fifteen doctors of various societies attended the meetings.

It is hoped to continue such meetings each summer at Mokanshan, and we should be glad to have this fact mentioned in the JOURNAL that intending medical visitors to Mokanshan may come prepared to take their part in the meetings.

I am, yours sincerely,

JOHN C. R. BEATTY, *Hon. Sec.*

HANGCHOW, September 16th, 1908.

Manila Medical Society.

At the meeting of May 4th a case of cholelithasis, with hepatic abscess as a complication, was presented by Major W. C. Borden.

The following are abstracts of the papers read :—

By Dr. P. E. Garrison.—*A new trematode parasite of man.* Ova found four times in native prisoners at Bilibid during the past year; 21 worms obtained from last case after dose of male-fern. Patient complained of no symptoms; physical examination negative, except a slight anemia. Hookworms and whipworms also present. *Morphology of Parasites:* Small Trematoda, of the family Fasciolidæ; 4, 5 to 6 mm. long by about 1 mm. broad; broadest at junction of anterior and median thirds; skin without spines; acetabulum near and much larger than oral sucker; pharynx globular; œsophagus very short; intestinal cæca unbranched and extend to posterior extremity; male and female genital pares open serarately between acetabulum and oral sucker, slightly to left of median line; testicles posterior, median, one directly behind the other, each divided into anterior and posterior lobe by median transverse constriction; ovary anterior to testicles; shell gland between testicles and ovary; uterus moderately developed; vitellogene glands highly developed, extending from plane midway between acetabulum and ovary to posterior extremity, meeting in median line ventrally and encroaching upon median field dorsally after they pass candad of the testicles; posterior excretory track divides just behind testicles into two lateral excretory canals. Ova average 107 microns long by 63 microns broad, with prominent operculum at one end, unsegmented at oviposition, develop ciliated embryo, which hatches in about one week. Specific and generic position of parasite not yet definitely determined, the indications being that it may be necessary to create a new species and perhaps a new genus also. (Specimens and photographs demonstrated.)

By Dr. R. P. Strong.—*The diagnosis of African tick fever from the examination of the blood.* The literature on the subject was first briefly reviewed which emphasized the frequent difficulty of obtaining a diagnosis from a microscopic examination of the blood with reference alone to the presence of parasites. An experimental examination on the serum reactions in the disease (agglutinatiug, spirolytic, and precipitin reactions) was undertaken. After describing the technique and the difficulties encountered in performing agglutiniu and spirolytic tests with spirochætæ, it was pointed out that none of these reactions were satisfactory for diagnostic purposes and that the most satisfactory methods of obtaining a diagnosis are by the examination of the blood with splenic puncture if necessary and by the inoculation of susceptible animals. A brief description of the tick conveying the disease was given, together with an exhibition of the ticks of economic importance. A microscopic description was also given on the differentiation by means of specific reactions of the African Spirochæta recurrens from that of the European variety of relapsing fever.

By Dr. E. H. Ruediger.—*Further filtration experiments with the virus of cattle plague.* In a previous report, it was found that blood and bile of animals sick with cattle plague lost its virulence on being passed through the Berkefeld filters marked V, N, or W.—V being the coarse filter, N the medium, and W the finest.

Peritoneal fluid diluted with physiological salt solution was virulent after having been passed through any one of these filters.

Owing to the possibility of the animals used in the latter experiments having become accidentally infected from other sources, the experiments with peritoneal fluid have been repeated with the following results:

Peritoneal fluid, after having been passed through the Berkefeld filters N or W transmitted cattle plague when injected under the skin of non-immune cattle. The coarse filter, V, was not used.

Peritoneal fluid, which had been passed through the Chamberland filters marked F or B, did not transmit cattle plague when injected under the skin of non-immune cattle.

New Members Elected.—Ernest L. Ruffner, U. S. Army; Percy L. Jones, U. S. Army.

At the meeting of August 3rd, clinical cases and pathological specimens were presented:

By Dr. N. M. Saleeby.—A dermoid cyst taken from an Ilocano woman.

By Dr. T. W. Jackson. — (1) Mediastinal neoplasm. (2) Aortic aneurism, rupturing into the œsophagus.

Abstracts of papers read as follows:—

Dr. A. S. Rochester—The treatment of the opium habit at San Lazaro Hospital. The main points observed while treating Chinese opium smokers:—

First. The rapid withdrawal of opium from the habitual smoker is attended with very little danger.

Second. In a comparatively short time his system regulates itself to carry out its offices without the aid of the narcotic.

Third. The constipating effect of opium, when taken into the system by smoking, is not great.

Fourth. The bad results of long continued opium smoking upon the physique of the Chinaman are less than those occasioned by the continued use of alcohol upon the Caucasian.

Fifth. The use of hyoscine is strongly contra-indicated in the treatment of these cases.

Doctors J. M. Phalen and H. T. Nichols.—Bichloride of mercury in the treatment of yaws, with demonstration of a case.—Similarity between the manifestations of syphilis and yaws. Various methods of administering mercury. History of the case.—Scout soldier, native of Cavite province, acquired yaws in April, 1907, following a cut from a razor. Lesions disappeared after four months' treatment with biniodide of mercury, mercury ointment, and potassium iodide, only to recur two months later. Again cleared up after four months of same treatment. Recurred in June, 1908, and came under care of writers. Treatment began with intramuscular injections of mercuric chloride, ½ grain every four days, which dose was soon raised to ⅔ grain. Rapid improvement from beginning of treatment, and practical disappearance of eruption in twenty days. Some untoward symptoms. Permanence of cure in question. Advantages of this method of administering mercury.

Dr. T. W. Jackson.—A case of intestinal bilharziosis. The patient, an American soldier, went to Porto Rico in 1898 remaining four months, when he was sent back to the United States on account of some bowel trouble, which lasted two months after his arrival. Has since resided in various parts of the United States and in Alaska. Came to Philippines in August, 1907, and has since served at Grande Island, Camp Stotsenberg, and Fort Wm. McKinley. Has had no bowel trouble from 1898 until November, 1907, when while at Camp Stotsenberg he acquired an attack of dysentery, from which he has not since entirely recovered. After returning to Ft. McKinley, the ova of Schistosomum hematobium, with lateral spines, were found in patient's stools by the writer. Source of infection thought to be Porto Rico. The present trouble probably due to an added amœbic infection. Discussion of the disposal of case.

New members elected.—*Active:* H. E. Schiffbauer, St. Paul's Hospital; Kent Nelson, U. S. Army; Allan McLaughlin, U. S. P. H. and M. H. S.; Albert G. Love, U. S. Army. *Associate:* Oscar Teague, Bureau of Science; Henry Winsor, University Hospital; Vernon L. Audrews, Bureau of Science.

P. E. Garrison,
Secretary.

Medical and Surgical Progress.

Tropical Diseases Section.

Under the charge of J. PRESTON MAXWELL, M.B., F.R.C.S.

ON THE PHAGOCYTOSIS OF RED BLOOD CORPUSCLES IN THE SPLEEN OF A CASE OF BLACKWATER FEVER.

In the *Indian Medical Journal* (March, 1908) there is an interesting article by Christophers and Bentley on the above subject. In a case of the disease they obtained blood from the spleen during the period of blood destruction. Two kinds of cells, a large macrophage and a smaller cell with a crescentic nucleus and just enough protoplasm to surround the red cell, were noted.

The red cells appeared to be either normal, more or less decolourized or represented by clear vacuoles the size of a red cell. No parasites of any kind were made out in them.

Phagocytosis of red cells is observed *in vitro* as a result of the action of specific sera, and the writers think that this phenomenon may be due to the liberation of specific poisons for the red cells under certain conditions at some stage in the process of malarial immunization, a process which is known in some degree to occur.

EPIDEMIC DROPSY AND BERI BERI.

For some months past there has been a discussion taking place in the *Indian Medical Gazette* on the question of the identity of epidemics of so called "epidemic dropsy" with "beri beri". The inspector appointed to investigate the matter, Captain Delany, M.D., in a paper (I. M. G., May, 1908) on the subject comes to the conclusion that the two diseases are distinct and suggests that epidemic dropsy is a "specific infectious or bacterial disease" conveyed from person to person by the agency of bed bugs.

A discussion on the matter took place in the Medical Section of the Asiatic Society of Bengal, when the speakers were practically unanimous in regarding the two diseases as distinct.

ON TRANSFUSION IN CHOLERA.

(*Indian Medical Gazette*, May, 1908.) Rogers and Mackelvie have an important paper advocating the use of hypertonic salt solution for transfusion in cholera. By the use of 1.25 per cent. solution of salt they claim to have obtained a considerable reduction in the mortality of these cases. About 4 pints should be injected at a time and intravenous injection should be practised; subcutaneous injection having proved practically useless in severe cases.

Pathological Notes.

Under the charge of JAMES L. MAXWELL, M.D.

The Etiology of Pulmonary Tuberculosis, by Sir William Whitla, M.D. *British Medical Journal*, 11th July, 1908.

In the study of the etiology of phthisis the really practical question narrows itself into the consideration of the two obviously probable routes of infection, namely, the respiratory tract and the intestinal surface. After the discovery of the tubercle

bacillus as the causal factor in tuberculosis and the detection constantly of its presence in the sputum of phthisical patients, it was universally held that pulmonary tuberculosis must be a primary disease. This still remains the accepted view. Koch states his views thus:

In by far the majority of cases of tuberculosis the disease has its seat in the lungs and has also begun there; from this fact it is justly concluded that the germs of the disease must have gotten into the lungs by inhalation. We know with certainty that they get into the air with the sputum of consumptive patients; the sputum of consumptive people, then, is to be regarded as the main source of the infection of tuberculosis. On this point, I suppose, all are agreed.

It shall be my endeavour to show that the results of recent experiments should lead us to conclude that the intestinal route plays a far more important rôle in the production of human pulmonary tuberculosis than has been hitherto recognised. The inhalation theory—the common possession of almost all physicians—is based upon a recognition of the results of pulmonary anthracosis, pathological or experimental, and upon the success of inducing pulmonary tuberculosis in animals by causing them to inhale an atmosphere impregnated with tubercle bacilli. When an animal is made to breathe an atmosphere laden with fine carbon particles, the detection of the latter in the lung tissue has been hitherto regarded as positive proof that they reached the pulmonary parenchyma after their arrest in the alveoli, the usually accepted theory being that the carbon dust is conveyed inwards from the alveoli to the pulmonary parenchyma by the process of phagocytosis, and that exactly the same conditions govern the inhalation of tubercle bacilli. Occasionally instead of going on to development within the alveoli, the bacilli find their way through the mucous membrane and are carried by the lymph stream to the bronchial glands. Cornet considers the case to be amply proven:

1. By the many hundreds of animals which regularly fell sick after the inhalation of tuberculous material in moist or dry condition.

2. That this material exists in a shape fit for respiration in the environment of consumptives.

3. That there is an overwhelming frequency of phthisis among men exposed to just such a manner of infection.

The reports of the Lille investigators appeared so novel and startling, and the conclusions derived from them seemed to be of such vital importance in the elucidation of the etiology of human phthisis, that Prof. Symmers and I undertook a series of experiments upon guinea-pigs with the view of testing some of their results and studying the conclusions arising from them, especially with reference to Calmette's contention that in the immense majority of cases pulmonary tuberculosis is not contracted by inhalation.

Specimen 1. In order to roughly test the power of the pulmonary capillaries as a filtering mechanism for the arrest of fine carbon particles circulating in the blood, a mixture of China ink and water was injected into a large vein in the ear of an adult rabbit. This animal's lung, obtained by causing its death within an hour after injection, will be seen to be obviously highly charged with carbon particles.

Specimen 2. An adult guinea-pig, killed after being fed for four days with an emulsion of China ink in olive oil and water. The emulsion was introduced direct into the animal's stomach through a soft rubber tube. The specimen shows the lungs to be engorged with carbon while the mesenteric glands are quite free. This experiment performed in a score of cases, including modifications, such as the mixing of the carbon with the animal's ordinary food, always gave the same striking result.

Specimen 3. In another series of experiments the carbon particles were injected into the peritoneal cavity by a hypodermic syringe, and similar results were obtained; the lung of the adult guinea-pig being found to be infiltrated

with the foreign substance. whilst the abdominal lymphatic glands were free.

The explanation of these results is obvious: the carbon particles effect an easy entrance through the intestinal epithelial surface; reaching the lacteal or lymphatic paths they pass through the lymphatic glands of the mesentery, and finally, either enclosed in phagocytes or free, find their way into the thoracic duct to be poured into the venous circulation before being arrested in the capillaries of the lung.

When young animals are used, however, the sequence does not follow; the lungs escaping entirely, as the mesenteric glands form a bar to the passage of the carbon particles.

It is obvious that the main question for the practical physician to be convinced of is: Does the tubercle bacillus pass through the intestinal mucosa like the fine particles of China ink without causing any lesion or leaving any local evidence of its point of entrance? It may at once be asserted without fear of contradiction that this vitally important fact has been conclusively proven by experiments too numerous to mention. After describing the investigation of many other workers the writer says: Calmette and his co-workers have therefore been driven to the conclusion "that in the immense majority of cases, pulmonary tuberculosis, is not contracted by inhalation, but by the ingestion of bacilli or bacilliferous products which penetrate the intestinal mucosa".

[The following notes of a new treatment of leprosy will be of great interest to all physicians in China. At the same time, after the many failures of promising treatments in the past and especially with Capt. Rost's unsuccessful attempts fresh in our minds, it is impossible not to view these matters with a considerable amount of scepticism.]

A SPECIFIC TREATMENT OF LEPROSY (by Prof. Deycke, M.D.).

Despite many interesting facts observed, we did not succeed in growing the lepra bacillus in the form in which it is seen in leprous tissue; we isolated, however, from several severe cases of nodular leprosy a characteristic micro-organism which on account of its specific characters and habitat we termed Streptothrix leproides. The material from which the cultures were made, was obtained by throwing back a flap of skin, including a non-ulcerated recent leproma, and taking fragments of lepra tissue from the under surface of the leproma. The tissue so obtained was placed in normal salt solution and incubated at 37° C. for several weeks. The filaments of the mass were now observed growing from the mass in great profusion. In order to ascertain whether there were any relationship with the lepra bacillus, I ventured on one occasion to inject a small quantity of a living culture in a very severe case of leprosy. Irrespective of a slight induration at the site of injection, no results were observed. The patient, however, obstinately maintained that the injection had had a beneficial effect on him, and he was not satisfied till I repeated the injections at weekly intervals. Under this extraordinary treatment the patient, whose disease was severe and accompanied by high fever, became completely free from fever, and his extensive leprous symptoms retrogressed so rapidly and in so remarkable a manner that after two months he considered himself to be thoroughly cured and left the bospital. Seeing that similar results were also obtained in other cases of leprosy, we naturally made it our task to discover the curative principle coutained in the cultures. After much trouble we succeeded in discoveriug a chemically well-defined substance which,

on the strength of very numerous trials made on man could, with certainty, be regarded as the sole carrier of the active principle. This substance, called "nastin" by us, is a neutral fat. This is strange, as we are accustomed to look upon genuine neutral fats as chemically very inactive substances.

By giving suitable doses of pure "nastin" by hypodermic, there ensued more or less intense reactive processes in the leprous tissue. These reactions consisted in inflammatory swelling, in pulp-like softening, in true suppuration and necrosis of the leprous formations, to which these processes were exclusively confined; the normal parts of the tissue remaining unaffected.

There existed very great differences regarding the capacity for reaction of individual leprous patients. Whereas some of them responded to "nastin" injections by very violent reactions of long duration and dangerous to life; a small number proved apparently completely refractory.

The author then gives his reasons for believing that the severity of the reaction depended on the amount of leucocytosis which accompanied the injection of "nastin". In refractory cases a previous injection of sodium cinnamate gave a leucocytosis, at the height of which an injection of "nastin" gave very violent result. Eventually he discovered that two per cent. benzoyl-chloride solutions with nastin added in varying proportion gave the desired effect of a moderate reaction. He then goes on:—

The conclusion drawn by me from my experience hitherto are summed up in the short sentence: Benzoyl-nastin is an agent which directly acts on lepra-bacilli. This sentence expresses the advantages and the progress affected by our method of treatment of leprosy as compared with other therapeutic endeavours. On the other hand, it clearly points out the limitations of the method. Rapid visible results should not lead to over-rating the new method of treatment and its natural limitations, nor should occasional absence of expected changes and retrogression of leprous symptoms lead to underrating this method. With patience one will be able generally to effect at least the arrest of the leprous process; frequently, however, far better results will be obtained.—*British Medical Journal*, 4th April, 1908.

Gynaecological Notes.

Under the charge of KATE C. WOODHULL, M.D.

A CASE OF OVARIAN HERNIA.

The comparative infrequency of ovarian hernia makes the following case of more than usual interest:—

The patient was an American. Married for 14 years. Occupation, housework. Has had five children. All are living and in fair health. One miscarriage two years ago. Labors all difficult; the last delivery being with instruments. Perineum and cervix torn with first child. These were repaired four years ago. Patient complained of dragging pains in the small of the back, headaches, tired feeling, crampy-burning pain in the lower abdomen, and pain and swelling in the left groin. One year ago patient noticed for the first time a small swelling in the left groin. This could be easily replaced, but came down again when patient was working while standing. "By spells" the tumor would seem to grow larger and then

subside. Sometimes at the menstrual period it would be slightly larger aud more painful. Very little trouble in reducing the hernia until lately. When difficult to replace she experienced "burning, sickening pains" which extended up from the left groin and then across the abdomen to the other side.

The patient was first seen September 21st, 1907. She complained of "burning, crampy pain" in small of back and across lower abdomen. Vaginal examination revealed the following: Ovary on right side easily palpated and apparently normal. Parametra on that side normal. On careful palpation on left side no ovary could be felt, but when the external hand was placed in the left inguinal region the woman complained of pain. Examination there revealed a tumor about the size of a pigeon's egg, just above Poupart's ligament. It was slightly irregular and had a firm elastic feeling. On coughing no expansile impulse could be obtained. With the left thigh flexed, the tumor could be rather easily reduced by gentle manipulation. The patient complained, however, of some sickening pain. The external abdominal ring readily admitted tip of the index finger. When the patient strained, or coughed while in the recumbent position, the hernia did not easily come down. It reappeared, however, with such efforts when the patient was upon her feet. A provisional diagnosis of inguinal ovarian hernia was given, and after reducing the hernia the patient was told to return for operation September 28th.

The woman claims that at four o'clock on the morning of September 25th, while straining at stool, a larger and firmer tumor appeared in left groin than had ever been there before. It was firm and quite sensitive to the touch, especially at its lower end. The pain increased steadily. All efforts of the patient and her friends failed to reduce the hernia, and she was sent to the hospital. It should be noted that the patient begau to menstruate the same morning and continued to flow for five days after entering the hospital.

When seen shortly after noon September 25th, the patient complained of great pain in the left groin. On manipulating the hernia in an effort to reduce it, the pain seemed to be excruciating. An ovoid tumor, about the size of a large lemon, was seen in the left groin above Poupart's ligament. It was quite firm and slightly irregular at its lower pole; more elastic and fluctuating near the external abdominal ring. Several attempts were made to reduce the hernia; the patient crying all the while with pain. Finally the upper part suddenly slipped back with a gurgling sensation as if a tense bag of waters had ruptured. After this was replaced, the firmer ovoid mass below it was easily reduced. A firm pad and bandage were then applied, the foot of the bed raised, and morphia gr. ¼ hypo. ordered. After this the woman became fairly comfortable. She took light nourishment. Had a little desire to vomit. Bowels were thoroughly moved in two days.

Patient was in fair condition to operate on October 2nd. Operation by Dr. W. H. Humiston. On opening the abdomen the uterus was seen to be in anteflexion and slightly bent towards the left side. The left broad ligament was relaxed and the appendages freely movable. The left ovary was sclero-cystic, and in proximity to it was a parovarian cyst about the size of a small lemon. The fimbriated extremity of the tube, together with ovary and parovarian cyst, could be easily displaced into the external inguinal ring. These structures

had undoubtedly made up the contents of the hernial sac. The right tube and ovary were apparently normal.

The left tube and ovary, together with the parovarian cyst were ligated off and removed in the usual manner. With a very small round needle carrying fine silk thread, the edges of the internal inguinal ring were carefully drawn together *from within* by means of a continual stitch. The abdomen was then closed with interrupted silkworm-gut sutures, the sutures being placed from within outwards and catching a small portion of peritoneum, muscle, fascia, and skin. The edges of the skin were accurately approximated. A firm pad was applied over the external abdominal ring and the ordinary dressings over the wound.

The woman made an uneventful recovery, and was up in about three weeks. The abdominal wound healed perfectly. No recurrence of the hernia. The woman returned a month after leaving the hospital, with an exacerbation of her old pulmonary trouble, but with no signs of hernia and no discomfort in the abdomen or pelvis.—Richard A. Bolt, A.B., M.D., in *Surgery, Gynecology and Obstetrics*, March, 1908.

STAB WOUND OF FETUS IN UTERO.

Dr. D. A. K. Steele, senior professor on surgery, College of Physicians and Surgeons, Chicago (*Surgery, Gynecology and Obstetrics*, March, 1908), gives the history of a case briefly as follows:

Mrs. M. in a fit of anger stabbed herself with a knife in the right side of the abdomen, four inches to the right and one and one-half inches below the umbilicus. At this date she was six and one-half months' pregnant. She was taken to St. Elizabeth's Hospital and treated for one week, when the wound in the abdominal wall healed. She stated that the surgeons at the hospital told her that the wound had probably not penetrated the uterus.

She was delivered at term of a live male child, normal and fully developed, with the exception that, protruding from a wound in the lateral aspect of the abdominal wall of the left side, one and one-half inches above the anterior superior spinus process of the ileum was a mass the size of a closed fist, which on examination was found to be the intestines.

At the point indicated was a partially healed incised wound, one inch in length. Protruding through this wound, adherent to its margins, was the jejunum, the ileum, and all the colon down to the sigmoid flexure. The upper portion of the jejunum was enormously dilated, being one and one-half inches in diameter. The abdominal cavity was found empty, except for the liver, spleen, pancreas and stomach, about four inches of duodenum and two inches of the sigmoid flexure of the descending colon and rectum. All the rest of the gastro-intestinal tract lay outside of the body, protruding through the stab wound.

By widely separating the edges of the wound it was possible to restore the entire mass to the abdominal cavity. The cavity was filled with a warm normal salt solution and the wound closed. The child reacted well and survived the operation eight hours. The post mortem examination showed that the jejunum had been completely cut across by the stab wound penetrating the right abdominal wall of the mother, the right wall of the gravid uterus, and the left abdominal wall of the fetus in utero, completely severing the jejunum about six inches below its juncture with the duodenum.

The extraordinary feature of this case lies in the fact that a stab wound through the abdominal walls of the mother, penetrating the gravid uterus, entering the abdomen of the fetus in utero, completely severing the jejunum, and permitting the escape of the large and small intestine through the wound of the abdominal wall of the fetus, should not in any way have interfered with the growth and development of the fetus in utero, nor seriously affected the recovery of the mother.

Another interesting fact is the complete occlusion of the two divided ends of the jejunum and the presence of nearly three ounces of glairy, sanguinolent fluid in the stomach of the fetus at the time of the operation ten hours after birth. Unfortunately the fluid was not preserved, so I am unable to present a chemical analysis of it, or to throw any light on the problem discussed by our obstetrical friends as to the nourishment of the fetus in utero by determining whether or not the fluid in the stomach was identical in its constituents with amniotic fluid. In looking up the literature of the subject no other such case was found.

Correspondence.

KULING, August 27th, 1908.

DEAR DOCTOR: I am with you heart and soul in the desire to make the papers, not the result of a few hours' writing, but of many weeks' study and work. I have a number of ideas in my head as problems which will require elucidation and on which people might be making observations. I wish I had your ideas of some of the things which people need observe in internal and tropical medicine. Of course, as you say, the great report will be the fecal report. But in addition, there ought to be a definite lot of contributions on other problems. I have plans on hand for a study of the following:—

The Next Conference.

1. Malarial prophylaxis in schools, etc., suggested by Montgomery's paper.
2. Ultimate results in trachoma, by Cu-So4, roller forceps, etc.
3. Traumatism and disease resulting from tropical conditions and practices.
4. The habitual use of opium as a factor in the production of disease.

The last two subjects were suggested by an article in the *Journal A. M. A.* for June 20th, page 2109.

5. The occurrence and significance of indicanuria. Article in *Journal A. M. A.*, June 20th.
6. The physical signs of the pretuberculous stage in those with a tendency to consumption. By this I refer to those measurements, etc., which have been already suggested in the C. M. M. JOURNAL as suggestive of tuberculosis when auscultation, percussion, and examination of sputum revealed nothing.
7. Studies of unnamed fevers of the tropics, with reports of blood examinations and of cultures wherever possible. See *Jour. of Trop. Med.*, June 15th, 1908, article on the 7-day fever of Indianports by F. H. A. Clayton; also the article by George Stooke in the July issue of our own C. M. M. JOURNAL. Fecal reports should also accompany these reports.
8. Physiological studies. Measurements, etc., of the standard Chinese youth, especially in our schools and colleges, for the sake of having set up some standard which we might compare with to determine pathological states.

I am conferring with Adrian Taylor, of Yangchow; H. B. Taylor, of Ngankin; McCracken, of Canton, and several others, to stimulate work.

E. H. HUME.

AMOY, August 10th, 1908.

MY DEAR DOCTOR: It is really refreshing to see your energy. You make me into a chairman of a "Committee on Animal Parasites Exhibit".

MORE Next Conference.

I would suggest that (as at the British Medical Associatiou) the committee FIX the subjects for discussion, on the three days of the conference, choose and invite the speakers who are to open the debate, and let all other papers be of secondary importance and taken as read if the writer is not himself present. For instance, say:—

Wednesday Morning: Subject for debate—Parasitology: "The pathological states brought about by the presence of the round worm."

To be opened by —— and ——. Each of the openers to be allowed 15 minutes; the speakers, 5 minutes each. (I would suggest this as one of the subjects.)

Afternoon: Continuation from morning, if unfinished. Private papers, at the call of the president.

Thursday: A subject in surgery.

Friday: A subject in medicine.

I would choose good men for the opening papers, and even if they are not themselves able to be present let their papers be read for them by the secretary.

The reason I suggest this subject of the round worm is that a friend and I hold diametrically opposite views as to the harmfulness of its presence in the human body. It is a subject on which nearly everyone will have an opinion and there should be a good debate.

Kindest regards,
Yours very sincerely,
J. PRESTON MAXWELL.

PING-YIN, Shantung,
August 22nd, 1908.

Editors of the JOURNAL.

DEAR SIRS: Having at last taken pen in hand to write to you, may I refer to the question of title you raised some time ago. Like nearly all my women colleagues in China I have hitherto left the point for others to decide. One can only speak for oneself of course, but I certainly prefer the title of "women-doctors" to any other style of designation. Is it not the true feminine of the equivalent masculine form "man-doctor"? I know that at college we scorned the title of "lady medicals", and there was a standing joke to the effect that the head porter was one day heard to exclaim in pettish tones that "he never could get them charladies to remember to put soap in the women's dressing rooms," and "char ladies" they remained for ever afterwards, whilst we were proud to have our honourable title duly recognized in the proper quarter!

Title Again.

Believe me, yours sincerely,
MARGARET PHILLIPS.

PAISLEY, Ont., Canada,
June 29th, 1908.

DEAR DOCTOR: In the May No. of the JOURNAL at hand, I see my article on "Go Kan Jui Mu" contains this error: "3 ounces of normal salt" should have read 3 pts. [Apologies.—ED.]

We have now been in Canada three weeks and will leave for the States in a few days. We spent a profitable one month in England, and I hope to return at the end of next summer for some study.

I hope to spend some time with the Mayos in Rochester this winter. [Recommend a chain-armor cholera-belt.—ED.]

Believe me, sincerely yours,
J. H. MCCARTNEY.

MOKANSHAN,
August 6th, 1908.

MY DEAR DOCTOR: A month or more before leaving my station I was told by a foreign-trained Chinese

physician that an Imperial decree had ordered the Chinese medical profession to organize prefectural, and I believe provincial, societies, which societies should consider and report a standard to be adopted as the basis for examinations for license to practise. In Hangchow, I am told, representatives of a native medical society have sought Dr. Main's advice on certain questions. Have you heard about it, can you show us a copy of the decree, and can our Association do anything to help this good thing along?

I am, sincerely yours,
F. W. GODDARD.

TAMSUI, July 11th, 1908.

DEAR DOCTOR: We hope this year to have some hospital work to report. We have opened up old "Mackay hospital at Tamsui" as a make-shift until we get our new building, which we contemplate erecting in 1909. At present we can accommodate only sixteen in-patients. Our out-patients are quite numerous on dispensary days. Our average ran as high as two hundred, our maximum being two hundred and sixty. At that stage we gave notice that we hereafter would limit the number to 100 patients a day, as our staff is too small to handle more than that number.

Wishing you every success,
I am, yours sincerely,
J. Y. FERGUSON.

YUNG-CHOU-FU, Hunan,
September 29th, 1908.

DEAR DOCTOR: I am glad that the JOURNAL gives so much space to hospital design. It is an incalculable advantage to us who are not yet fully crystalised.

I have just been reading "The New Engchhun Hospital", and after hopelessly trying for the third time to plan the place in my mind, I give it up, deeply regretting that a carefully written article should be spoilt by the absence of one-half page of diagram.

Might I suggest—these articles have a very practical interest—would an appendix page of dimensions, cost, and practical hints be out of place?

Yours sincerely,
GEO. HADDEN.

KULING, August 25th, 1908.

DEAR DOCTOR:—Last night we held our annual meeting. Enclosed find report for the year. It has been an unfortunate year. I only came to Kuling a week since, and nobody seemed to whip together the members. We hope for better things next year. Have just emerged from the thick of cholera epidemic in Hankow. Have been quite alone there. Splendid, though horrible experience. To see the natives fall down dead on the street is not a pleasant spectacle. Never shall I forget the experience and sights.

All good wishes, faithfully yours,
W. ARTHUR TATCHELL.

Personal Record.

ARRIVALS.

October 5th, Dr. P. B. COUSLAND, Shanghai.

October 9th, Miss V. J. LEE, Hangchow; Z. S. LOFTIS, M.D., Batang; G. R. LEGGATE, M.B., Ch.B., Liaoyang; THOMAS COCHRANE, M.B., C. M., Peking.

October 14th, Miss E. M. TRIBE, M.D., Amoy.

DEPARTURES.

October 3rd, Dr. FRANCES F. CATTELL, for U. S. A.

October 5th, Dr. and Mrs. W. H. VENABLE, for U. S. A.

October 7th, Dr. GERTRUDE TAFT, for U. S. A.

Volume XXI. Number 1

JANUARY, 1907

The China Medical Missionary Journal.

Business Office, 18 Peking Road, Shanghai.
Editorial Office, 4 B Minghong Road, Shanghai.

Bi-monthly. $3.00 ($1.50 gold) per year.

HENRI NESTLE

LONDON. VEVAY. NEW YORK.

MANUFACTURERS OF THE WELL KNOWN

SWISS MILK (BIRD NEST BRAND)

(RICHEST IN CREAM)

AND

INFANT'S FOOD.

These preparations are recommended and prescribed by the medical faculty, and are introduced in Hospitals, Nurseries, and Homes of the Clergy and Gentry throughout the World.

They are the Best.

Take no others.

Volume XXI. Number 2

MARCH, 1907

The China Medical Missionary Journal.

PUBLISHED BY THE CHINA MEDICAL MISSIONARY ASSOCIATION.

Business Office, 18 Peking Road, Shanghai.
Editorial Office, 4 B Minghong Road, Shanghai.

Bi-monthly. $3.00 ($1.50 gold) per year.

HENRI NESTLE

LONDON. VEVAY. NEW YORK.

MANUFACTURERS OF THE WELL KNOWN

SWISS MILK (BIRD NEST BRAND)

(RICHEST IN CREAM)

AND

INFANT'S FOOD.

These preparations are recommended and prescribed by the medical faculty, and are introduced in Hospitals, Nurseries, and Homes of the Clergy and Gentry throughout the World.

They are the Best.

Take no others.

Volume XXI. Number 3.

MAY, 1907

The China Medical Journal.

PUBLISHED BY THE

MEDICAL MISSIONARY ASSOCIATION OF CHINA.

Business Office, 18 Peking Road, Shanghai.

Editorial Office, 4 B Minghong Road, Shanghai.

Bi-monthly. $4.00 ($2.00 gold, 8 shillings) per year.

HENRI NESTLE

LONDON. VEVAY. NEW YORK.

MANUFACTURERS OF THE WELL KNOWN

SWISS MILK (BIRD NEST BRAND)

(RICHEST IN CREAM)

AND

INFANT'S FOOD.

These preparations are recommended and prescribed by the medical faculty, and are introduced in Hospitals, Nurseries, and Homes of the Clergy and Gentry throughout the World.

They are the Best.

Take no others.

Volume XXI. Number 4.

JULY, 1907

The China Medical Journal.

博醫會報

PUBLISHED BY THE

MEDICAL MISSIONARY ASSOCIATION OF CHINA.

Business Office, 18 Peking Road, Shanghai.

Editorial Office, 4 B Minghong Road, Shanghai.

Bi-monthly. $4.00 ($2.00 gold, 8 shillings) per year.

HENRI NESTLE

LONDON. VEVAY. NEW YORK.

MANUFACTURERS OF THE WELL KNOWN

SWISS MILK (BIRD NEST BRAND)

(RICHEST IN CREAM)

AND

INFANT'S FOOD.

These preparations are recommended and prescribed by the medical faculty, and are introduced in Hospitals, Nurseries, and Homes of the Clergy and Gentry throughout the World.

They are the Best.

Take no others.

Volume XXI. Number 5.

SEPTEMBER, 1907

The China Medical Journal.

博醫會報

PUBLISHED BY THE

MEDICAL MISSIONARY ASSOCIATION OF CHINA.

Business Office, 18 Peking Road, Shanghai.

Editorial Office, 4 B Minghong Road, Shanghai.

Bi-monthly. $4.00 ($2.00 gold, 8 shillings) per year.

Medical Publication Committee.

NEW BOOKS.

Neal's Eye Diseases. New Edition. Colored Plates.

Price bound in thick paper $0.75

„ „ „ boards 1.40

Neal's Skin Diseases. New Edition.

Price bound in thick paper 0 50

„ „ „ boards 1.00

Fulton's Gynecology. 2 vols.

Price bound in thick paper 1.75

Can also be orderd from the China Baptist Publication Society, Canton.

Manual of Nursing. Compiled by the C. C. M. M. A.

Price 0.25

Terminology. Terms in Medicine, Surgery, Gynecology, Obstetrics, etc. 0.40

The other lists are out of print. An Anglo-Chinese Medical Lexicon is now in the Press and will be published early this winter.

Cousland's Physiology. Revised Edition (third), now in the Press.

Volume XXI. NOVEMBER, 1907. Number 6

The China Medical Journal.

博醫會報

PUBLISHED BY THE

MEDICAL MISSIONARY ASSOCIATION OF CHINA.

Business Office, 18 Peking Road, Shanghai.

Editorial Office, 4 B Minghong Road, Shanghai.

Secretary and Treasurer, 2 Shantung Road, Shanghai.

Published Bi-monthly. $4.00 ($2.00 gold, 8 shillings) per year.

Medical Publication Committee.

NEW BOOKS.

Neal's Eye Diseases. New Edition. Colored Plates.

Price bound in thick paper	$0.75
„ „ „ boards	1.40

Neal's Skin Diseases. New Edition.

Price bound in thick paper	0.50
„ „ „ boards	1.00

Fulton's Gynecology. 2 vols.

Price bound in thick paper	1.75

Can also be orderd from the China Baptist Publication Society, Canton.

Manual of Nursing. Compiled by the C. C. M. M. A.

Price	0.25

Terminology. Terms in Medicine, Surgery, Gynecology, Obstetrics, etc. 0.40

The other lists are out of print.

An Anglo-Chinese Medical Lexicon is now in the press and will be published early in 1908.

Cousland's Physiology. Revised Edition (third), now in press.

Volume XXII. JANUARY, 1908. Number 1

The China Medical Journal.

博醫會報

PUBLISHED BY THE

MEDICAL MISSIONARY ASSOCIATION OF CHINA.

Business Office, 18 Peking Road, Shanghai.

Editorial Office, 4 B Minghong Road, Shanghai.

Secretary and Treasurer, 2 Shantung Road, Shanghai.

Published Bi-monthly. $4.00 ($2.00 gold, 8 shillings) per year.

Medical Publication Committee.

PUBLICATIONS.

Ingram's Therapeutics.

(Hobart Amory Hare, Lea, Philadelphia.)

Vol. I is now ready and will shortly be placed on sale. It can also be obtained through Dr. Ingram, Tsingchow Chi, Chihli. The price (for the two volumes) is not yet settled.

Neal's Eye Diseases. New Edition. Colored Plates.

(Norris and Oliver, Blakiston, Philadelphia.)

Price bound in thick paper	$0.75
„ „ „ boards	1.40

Neal's Skin Diseases. New Edition.

(Duhring, Blakiston, Philadelphia.)

Price bound in thick paper	0 50
„ „ „ boards	1.00

Fulton's Gynecology. 2 vols.

(C. B. Penrose, Philadelphia.)

Price bound in thick paper	1.75

Dr. Penrose's Gynecology and this translation can be ordered from the China Baptist Publication Society, Canton.

Manual of Nursing. Compiled by the C. C. M. M. A.

Price	0.25

Terminology. Terms in Medicine, Surgery, Gynecology, Obstetrics, etc. 0 40

Terms in Anatomy and Physiology, and in Materia Medica and Bacteriology—a very few copies still in stock, bound in boards.

The English-Chinese Medical Lexicon should be ready by April.

Cousland's translation of Halliburton's Physiology, third edition (John Murray, London); Nile's translation of Evan's Obstetrics (Lea Bros., Philadelphia) and Venables' translation of Archinard's Microscopy and Bacteriology (Lea Bros., Philadelphia) are now in the press. It is hoped that all will be ready in whole or the first volumes by the beginning of the spring session. The English originals should be ordered *now*, either directly from home or through a Shanghai bookroom or bookseller, so as to be on hand in time.

For sale at the Presbyterian Mission Press.

Volume XXII. MARCH, 1908. Number 2

The China Medical Journal.

博醫會報

PUBLISHED BY THE

MEDICAL MISSIONARY ASSOCIATION OF CHINA.

Business Office, 18 Peking Road, Shanghai.

Editorial Office, 4 B Minghong Road, Shanghai.

Secretary and Treasurer, 2 Shantung Road, Shanghai.

Published Bi-monthly. $4.00 ($2.00 gold, 8 shillings) per year.

Medical Publication Committee.

PUBLICATIONS.

Ingram's Therapeutics.

(Hobart Amory Hare, Lea, Philadelphia.)

Vol. I is now ready. It can also be obtained through Dr. Ingram, Tsingchow Chi, Chihli.

Price of the 2 vols. $3.00

Neal's Eye Diseases. New Edition. Colored Plates.

Price bound in thick paper 0.75

„ „ „ boards 1 40

Neal's Skin Diseases. New Edition.

(Duhring, Blakiston, Philadelphia.)

Price bound in thick paper 0 50

„ „ „ boards 1.00

Fulton's Gynecology. 2 vols.

(C. B. Penrose, Philadelphia.)

Price bound in thick paper 2 00

Dr. Penrose's Gynecology and this translation can be ordered from the C ina Baptist Publication Society, Canton.

Manual of Nursing. Compiled by the C. C. M. M. A.

Price 0.25

Terminology. Terms in Medicine, Surgery, Gynecology, Obstetrics, etc. 0 40

The English-Chinese Medical Lexicon should be ready by May.

Cousland's translation of Halliburton's Physiology, third edition (John Murray, London); Nile's translation of Evan's Obstetrics (Lea Bros., Philadelphia) and Venables' translation of Archinard's Microscopy and Bacteriology (Lea Bros., Philadelphia) are now in the press. The English originals should be ordered, either directly from home or through a Shanghai bookroom, so as to be on hand in time.

For sale at the Presbyterian Mission Press.

Volume XXII. MAY, 1908 Number 3.

The China Medical Journal.

博醫會報

PUBLISHED BY THE

MEDICAL MISSIONARY ASSOCIATION OF CHINA.

Business Office, 18 Peking Road, Shanghai.

Editorial Office, 4 B Minghong Road, Shanghai.

Secretary and Treasurer, 2 Shantung Road, Shanghai.

Published Bi-monthly. $4.00 ($2.00 gold, 8 shillings) per year.

Medical Publication Committee.

PUBLICATIONS.

Medical Lexicon. An English-Chinese Medical Terminology. Compiled for the Terminology Committee by Dr. Cousland.

Price bound in paper boards $1.60
" " " cloth 2.00

Interleaved 50 cents extra.

Cheap edition for Students. Price bound in paper 0.90

Physiology, Halliburton's, (Kirkes) (abbreviated). Translated by Dr. Cousland. (Murray, London.) Third Edition, 1908.

Price bound in paper boards 1.50
" " " cloth 2.00

Obstetrics, Evans-Ashton. Revised and translated by Dr. Niles.

Ready in July. Vol. I can be supplied now. This is to take the place of Kerr's Obstetrics, which will now be withdrawn. Some chapters are from that work (being translated from Ashton's Essentials of Obstetrics), but the larger part is a translation of Evans' Obstetrics.

Price bound in paper boards 1.70
" " " cloth 2.20
" " " stiff paper, 2 vols. 1.80

Bacteriology, Archinard's. Translated by Dr. Venable. (Microscopy and Bacteriology. Archinard. Lea, Phil.)

Price bound in paper boards 1.30
" " " cloth 1.70

Kerr's Practice of Medicine. Revised by Dr. Niles.

Vol. I can now be had, and the complete book, 4 vols., should be ready by the autumn. It can also be obtained from the China Baptist Publication Society, Canton.

Therapeutics, Hare's. Translated by Dr. Ingram. (Hobart Amory Hare. Lea, Philadelphia.) Vol. II ready June.

2 Vols. Price bound in paper 3.00

This can also be obtained from the Kuang Hsüeh Hui shop, Têng Shih K'ou street, Peking.

Eye Diseases. Translated by Dr. Neal. Fourth Edition, 1907.

Price bound in thick paper 0.75
" " " boards 1.40

Skin Diseases. Translated by Dr. Neal. Third Edition, 1907.

Price bound in thick paper 0.50
" " " boards 1.00

Gynecology, Penrose's. Translated by Dr. Fulton. (C. B. Penrose, Philadelphia.)

2 Vols. Price bound in thick paper 2.00

Dr. Penrose's Gynecology and this translation can be ordered from the China Baptist Publication Society, Canton.

Manual of Nursing. Compiled by the C. C. M. M. A. Price 0.25

Gray's Anatomy, translated by Dr. Whitney, is the only text-book on that subject. See special advertisement.

For sale at the Presbyterian Mission Press.

Volume XXII. JULY, 1908 Number 4.

The China Medical Journal.

博醫會報

PUBLISHED BY THE

MEDICAL MISSIONARY ASSOCIATION OF CHINA.

Business Office, 18 Peking Road, Shanghai.

Editorial Office, 4 B Minghong Road, Shanghai.

Secretary and Treasurer, 2 Shantung Road, Shanghai.

Published Bi-monthly. $4.00 ($2.00 gold, 8 shillings) per year.

Medical Publication Committee.

PUBLICATIONS.

Medical Lexicon. An English-Chinese Medical Terminology. Compiled for the Terminology Committee by Dr. Cousland.

Price bound in paper boards $1.60
" " " cloth 2.00

Interleaved 50 cents extra.

Cheap edition for Students. Price bound in paper 0.90

Physiology, Halliburton's, (Kirkes) (abbreviated). Translated by Dr. Cousland. (Murray, London.) Third Edition, 1908.

Price bound in paper boards 1.50
" " " cloth 2.00

Obstetrics, Evans-Ashton. Revised and translated by Dr. Niles.

This is to take the place of Kerr's Obstetrics, which will now be withdrawn. Some chapters are from that work (being translated from Ashton's Essentials of Obstetrics), but the larger part is a new translation of Evans' Obstetrics.

Price bound in paper boards 1.70
" " " cloth 2.20
" " " stiff paper, 2 vols. 1.80

Bacteriology, Archinard's. Translated by Dr. Venable. (Microscopy and Bacteriology. Archinard. Lea, Phil.)

Price bound in paper boards 1.30
" " " cloth 1.70

Kerr's Practice of Medicine. Revised by Dr. Niles.

Vol. I is now ready, and the complete book, 4 vols., should be published in the autumn. It should be obtained from the China Baptist Publication Society, Canton.

Price, per set, probably 2.00

Therapeutics, Marc's. Translated by Dr. Ingram. (Hobart Amory Hare. Lea, Philadelphia.)

2 Vols. Price bound in paper 3.00

This can also be obtained from the Kuang Hsüeh Hui shop, Têng Shih K'ou street, Peking.

Eye Diseases. Translated by Dr. Neal. Fourth Edition, 1907.

Price bound in thick paper 0.75
" " " boards 1.40

Skin Diseases. Translated by Dr. Neal. Third Edition, 1907.

Price bound in thick paper 0.50
" " " boards 1.00

Gynecology, Penrose's. Translated by Dr. Fulton.

(C. B. Penrose, Philadelphia.)

2 Vols. Price bound in thick paper 2.00

Dr. Penrose's Cynecology and this translation can be ordered from the China Baptist Publication Society, Canton.

Manual of Nursing. Compiled by the C. C. M. M. A. Price 0.25

Gray's Anatomy, translated by Dr. Whitney, is the only text-book on that subject. 935 Pp. 370 Ill. Brown paper, in 3 vols., $3.00; white, 1 vol., half leather $5.00, limp cloth $4.00; glossary separate at 50 cents.

For sale at the Presbyterian Mission Press.

Volume XXII. SEPTEMBER, 1908 Number 5.

The China Medical Journal.

博醫會報

PUBLISHED BY THE

MEDICAL MISSIONARY ASSOCIATION OF CHINA.

Business Office, 18 Peking Road, Shanghai.

Editorial Office, 4 B Minghong Road, Shanghai.

Secretary and Treasurer, 2 Shantung Road, Shanghai.

Published Bi-monthly. $4.00 ($2.00 gold, 8 shillings) per year.

Medical Publication Committee.

PUBLICATIONS.

Medical Lexicon. An English-Chinese Medical Terminology. Compiled for the Terminology Committee by Dr. Cousland.

Price bound in paper boards $1.60
" " " cloth 2.00
Interleaved 50 cents extra.
Cheap edition for Students. Price bound in paper 0.90

Physiology, Halliburton's, (Kirkes) (abbreviated). Translated by Dr. Cousland. (Murray, London.) Third Edition, 1908.

Price bound in paper boards 1.50
" " " cloth 2.00

Obstetrics, Evans-Ashton. Revised and translated by Dr. Niles.

This is to take the place of Kerr's Obstetrics, which will now be withdrawn. Some chapters are from that work (being translated from Ashton's Essentials of Obstetrics), but the larger part is a new translation of Evans' Obstetrics.

Price bound in paper boards 1.70
" " " cloth 2.20
" " " stiff paper, 2 vols. 1.80

Bacteriology, Archinard's. Translated by Dr. Venable. (Microscopy and Bacteriology. Archinard. Lea, Phil.)

Price bound in paper boards 1.30
" " " cloth 1.70

Kerr's Practice of Medicine. Revised by Dr. Niles.

Vol. I is now ready, and the complete book, 4 vols., should be published in the autumn. It should be obtained from the China Baptist Publication Society, Canton.

Price, per set, probably 2.00

Therapeutics, Hare's. Translated by Dr. Ingram. (Hobart Amory Hare. Lea, Philadelphia.)

2 Vols. Price bound in paper 3.00

This can also be obtained from the Kuang Hsüeh Hui shop, Têng Shih K'ou street, Peking.

Eye Diseases. Translated by Dr. Neal. Fourth Edition, 1907.

Price bound in thick paper 0.75
" " " boards 1.40

Skin Diseases. Translated by Dr. Neal. Third Edition, 1907.

Price bound in thick paper 0.50
" " " boards 1.00

Gynecology, Penrose's. Translated by Dr. Fulton.
(C. B. Penrose, Philadelphia.)

2 Vols. Price bound in thick paper 2.00

Dr. Penrose's Gynecology and this translation can be ordered from the China Baptist Publication Society, Canton.

Manual of Nursing. Compiled by the C. C. M. M. A. Price 0.25

Gray's Anatomy, translated by Dr. Whitney, is the only text-book on that subject. 935 Pp. 370 Ill. Brown paper, in 3 vols., $3.00; white, 1 vol., half leather $5.00, limp cloth $4.00; glossary separate at 50 cents.

For sale at the Presbyterian Mission Press.